Index to Contents, August 1945

(The Annual Index to Contents appears at the back of the December issue each year)

Airports and Aviation
Get Airport Plans Ready Now ... 7
Airport Plans of Some of the Larger Cities ... 99
Lewiston, Idaho, Ready for Air Service ... 99
Fees to Be Collected at Dallas Airport ... 115

Business Machines and Systems
Photocopying Brings Court House Up to Date ... 90

Citizens and Government
Award for Distinguished Civic Service ... 105
Governmental Research Association National Office ... 109

City Manager Plan
City Manager Appointments ... 109

Conferences and Conventions
Fewer Conventions? ... 7
Conventions—When and Where ... 103

Education and Publicity
Reports That Compel Attention ... 89
Publicity Helps Battle with Slums ... 93
Adult Education ... 109

Employment Problems
Water Works Manpower Savings ... 9
Should Cities Subsidize Industries? ... 88

Finance and Taxation
Seashore Recreational Plant Pays Well Cover, 71
Should Cities Subsidize Industries? ... 88
New Sources of Municipal Revenue ... 93
New Taxes for Post-War Projects ... 94
Allocation of Admission Tax to Municipalities ... 98

Fire Prevention and Control
Fires That Hand Pumps Douse ... 15
Rescue Squads ... 15

Government and Administration
Reports That Compel Attention ... 89
Governmental Research National Office 109

Housing
When the War Is Over, the Slums Must Go ... 5
President Truman Pledges Aid to Housing ... 5
Post-War Housing—Whose Job Is It? ... 76
Urban Redevelopment Legislation Analyzed ... 83
Publicity Helps Battle With Slums ... 93
Added Housing Aid and Powers, Illinois 97
Housing Mission to Great Britain ... 97
"Housing: A Community Job" ... 105
Your Community Is What You Make It 105

Interracial Relations
Race Riots Aren't Necessary ... 107

Laws and Legal Decisions
Urban Redevelopment Legislation Analyzed ... 83
Municipal Law Notes and Decisions ... 117

Letter to the Editor
"Battle of Noise" Routs Starlings ... 82

Lighting, Outdoor
Dramatic Memorial Fountain, Cleveland 111
Decorative Lighting in Parks ... 113

Memorials, War
Birch Grove in Shelburne, N. H. ... 82
Ventura's Honor Roll Board ... 88
Community Cooperation with the Military ... 92
What Service Men Favor in War Memorials ... 107
Dramatic Memorial Fountain, Cleveland 111

Mosquito Control
Modern Methods of Mosquito Control ... 69

News and Illustrations
Items from Manufacturers, etc. ... 135

Noise and Nuisances
Modern Methods of Mosquito Control ... 69
"Battle of Noise" Routs Starlings ... 82
Noise vs. Nuisance ... 82

Officials and Employees
Canadian Mayors Elect and Resolve ... 87
Edwin A. Fisher—98 Years Young ... 103
City Planning Agencies ... 127
Data on Organized Municipal Employees 127

Planning and Zoning
Winning the Peace at the Local Level ... 5
Tackling the Problem of Land Assembly ... 5
Post-War Stabilization—Joint Job ... 7
Urban Redevelopment Legislation Analyzed ... 83
Visualizing the Possibilities of Urban Redevelopment ... 84
Shopping Center Designed to Attract Shoppers ... 87

Vol. LX
No. 8

AUGUST
1945

The American City

Issued Monthly by the
American City Magazine Corporation
470 Fourth Ave., New York 16

HAROLD S. BUTTENHEIM
Editor

ALDEN W. WELCH
Secretary and Research Editor

Lt. (j.g.) WILLIAM S. FOSTER
Engineering Editor
(On leave of absence for naval duty)

MARJORIE BOGART
Associate Editor

EDGAR J. BUTTENHEIM
President

HERBERT K. SAXE, Treasurer
PRENTICE C. FORD, Ass't to President
Lt. Col. MYRON MacLEOD, Adv. Mgr.
(On leave of absence for military duty)

•

BRANCH OFFICES
Daily News Building, Chicago 6
GEORGE S. CONOVER, Vice-President

Mills Building, San Francisco 4
Pershing Square Building, Los Angeles 13
DUNCAN A. SCOTT & CO., Representative

•

Subscription, $2 per annum in
United States and Canada
$3 to foreign countries)
Single copies, 35c: Back numbers, 50c
Entered as second-class matter, July 20, 1910, at the Post Office at New York, N. Y., under Act of March 3, 1879.
Printed in U. S. A.

•

THE MUNICIPAL INDEX AND ATLAS used in connection with the current advertisements in THE AMERICAN CITY, places local officials in the most favorable position to obtain all types of available equipment and supplies from manufacturers who desire to serve municipal government departments. THE MUNICIPAL INDEX AND ATLAS (664 pages) is published annually by THE AMERICAN CITY MAGAZINE CORPORATION, 470 Fourth Avenue, New York 16, N. Y.

City Officials Eager for Modern Transportation ... 96
Business Men Start Community Planning 98
Airport Plans of Some of the Larger Cities ... 99
"Housing: A Community Job" ... 105
Your Community Is What You Make It 105
Churches in Residential Districts ... 119
Zoning and Planning Notes ... 119
Data on City Planning Agencies ... 127

Police and Crime
Practical Advances to Come in Police Radio ... 78
More Motocycle Officers, New Orleans 96
Data on Police Radio Facilities ... 127

Priorities
Taper Off of Priorities Begins ... 101

Public Health
Modern Methods of Mosquito Control 69
Bernard Shaw on Vital Statistics ... 86
Wholesale Blood Tests for Venereal Diseases ... 127

Public Safety
Fires That Hand Pumps Douse ... 15
Rescue Squads ... 15
New Type of Pedestrian Safety Island 74
More Motorcycle Officers, New Orleans. 96

Public Welfare
Community Cooperation with the Military ... 92

Purchasing
Post-War Tools ... 125

Records, Public
Photocopying Brings Court House Up-to Date ... 90

Recreation
Seashore Recreational Plant Pays Well Cover. 71
New York's Park Benches: A Correction 94

Refuse Collection and Disposal
Good Organization Pays ... 13
Incinerator Planned ... 13

Sewerage and Sewage Disposal
Elizabethtown's Sewage Treatment Plant 11
New Trunk Sewer, Columbus, Ga. ... 11
Sewerage Developments in England ... 11
Topeka Approves Use of Fiber Sewer Pipe ... 11
It Almost Runs Itself ... 79
Development of Sewage Treatment ... 101

Street Cleaning and Snow Removal
Good Organization Pays ... 13
Snow Cleaning at Danvers ... 13
Snow Removal Practice, Union Township ... 77

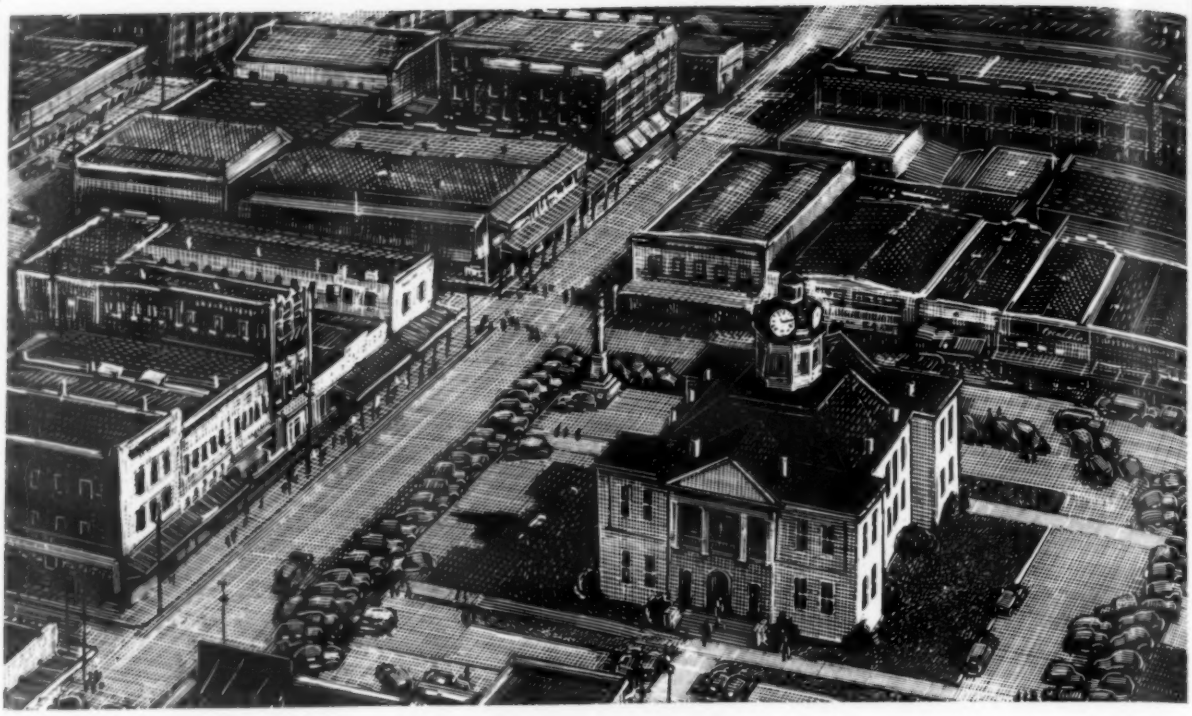
Street Construction and Maintenance
Federal-Aid Secondary Road System ... 77
Sioux Falls Street Department ... 85

Traffic and Transportation
New Type of Pedestrian Safety Island ... 74
City Officials Eager for Modern Transportation ... 96
Improvements Which Facilitate Steam Distribution ... 100
San Antonio's Skyline ... 115
Improvement in Bus Loading Facilities 121
John A. Beeler Dies ... 123
Survey Transit Needs on Metropolitan Area Basis ... 123
Modern Electric Transportation, San Francisco ... 125

Water Supply and Purification
New A.W.W.A. President ... 9
Successful Type Well ... 9
Water Works Manpower Savings ... 9
Post-War Plan Fills Wartime Water Need ... 72
Lead Service Pipe Installed at Yonkers. 90
Waukegan Gets Needed Water Storage ... 91
How Big a "Sugar Daddy" Should a Water Works Be? ... 97

See pp. 17, 22, 24, 26, 129, 131, 133 for catalogs and publications on municipal and civic subjects

For Index to Advertisements see page 164



TROY, ALABAMA

Now Has a Layne Automatic Water System

City Officials of Troy, Alabama are in high spirits these days. Where all others have failed, Layne has just completed a water system WITHIN THE CITY LIMITS that produces over 1,000,000 gallons daily. Furthermore this new system is equipped with the latest automatic control device which eliminates manual starting and stopping.

Prior to the completion of this new Layne System, all water for the city of Troy was obtained from wells located some three miles away. The success achieved by Layne will now enable the city to install other wells and thus abandon the distantly located and expensive to operate system.

Here again is proof that Layne's experience, knowledge and specialization always pays handsome dividends. Building this well was no easy task. It was drilled through rock strata from one to sixteen feet in thickness. Some five-hundred bags of cement were used to seal off all but the desired water bearing sand formations.

Layne is now almost entirely engaged in civilian Well Water System building—and is ready to serve you. Write, wire or phone for further facts, catalogs. LAYNE & BOWLER, INC., General Offices, Memphis 8, Tenn.

LAYNE
AFFILIATED COMPANIES

Layne-Arkansas Co., Stuttgart, Ark. ✱ Layne-Atlantic Co., Norfolk, Va. ✱ Layne-Central Co., Memphis, Tenn. ✱ Layne-Northern Co., Mishawaka, Ind. ✱ Layne-Louisiana Co., Lake Charles, La. ✱ Louisiana Well Co., Monroe, La. ✱ Layne-New York Co., New York City and Pittsburgh, Pa. ✱ Layne-Northwest Co., Milwaukee, Wis. ✱ Layne-Ohio Co., Columbus, Ohio ✱ Layne-Texas Co., Houston and Dallas, Texas ✱ Layne-Western Co., Kansas City, Mo., Chicago, Ill., and Omaha, Neb. ✱ Layne-Western Co., of Minnesota, Minneapolis, Minn. ✱ International Water Supply, Ltd., London, Ontario, Canada ✱ Layne-Hispano Americana, S. A., Mexico, D. F.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

LAYNE

WELL WATER SYSTEMS
VERTICAL TURBINE PUMPS

When the War Is Won, the Slums Must Go

Winning the Peace at the Local Level

VICTORY for democracy and freedom in the present world conflict will come in two stages—the triumph of our armed forces and the triumph of our peace forces.

In many respects the second task will be the more difficult. A notable step has been taken in the ratification, by almost unanimous vote of the United States Senate on July 28, of the United Nations Security Charter. But whether this action shall really usher in an era of world peace and steadily advancing human welfare will depend not only on international agreements and on national politics, but also on the efficient functioning of democracy at its grass roots in our local communities.

We in the United States have the technical knowledge and the productive capacity needed to provide adequate housing in decent, well-planned neighborhoods for all our citizens. This is no over-night task, however. It will take some decades to accomplish, but no municipality can meet the challenge of the times if this fundamental problem of banishing urban blight and slums is ignored.

Tackling the Problem of Land Assembly

ADOPTION during the last five years of enabling acts for urban redevelopment in seventeen states recognizes the need for facilitating public and private teamwork in the replanning and rebuilding of decadent city areas.* But there still remains the big hurdle of inflated land values in these areas and of how to write down to use value the cost of assembling such properties.

Methods by which this can be accomplished are discussed in National Housing Bulletin 3, "Land Assembly for Urban Redevelopment," an advance copy of which was released on July 28 by the National Housing Agency.

Although NHA points out that the bulletin covers a field in which there is almost no experience to use as a guide and warns that estimates are offered that cannot pretend to accuracy, these main conclusions are reached:

1. There is plenty of land in the center of almost all American cities to provide homes with openness and greenery, if the land can be made available on terms so that private developers can afford to use it without overcrowding.

2. To make this possible, it might be necessary to face a write down in the price of central land of 60 to 70 percent.

3. Low-density re-use of the land—not more than 20 families to the acre—is estimated on the average to produce a return of about 1.6 percent on the estimated acquisition cost.

4. To bridge the gap between this return and the cost of the money to pay for the land, public credit would have to be used and, in most cases, supplemented by contributions.

* See analysis of these laws by Seward H. Mott, page 83 of this issue.

President Truman Pledges Aid to Housing

We all recognize that housing is primarily a community responsibility. But we recognize that the federal government has a large share of responsibility, too. It has the obligation of helping private enterprise to do the greatest possible share of the housing job ahead and to provide communities with the aid necessary to insure adequate shelter for those whose needs cannot otherwise be met.

—From a letter written June 1, 1945, by President Harry S. Truman to Dr. Bryn J. Hovde, President, National Public Housing Conference, Inc.

In setting forth the purpose of the study, made by the Urban Development Division and prepared as the third in a series of NHA bulletins dealing with major problems in the transition from war to peacetime conditions in American housing, National Housing Administrator John B. Blandford, Jr., said:

"One of the critical questions of the immediate future is: shall we have simply another building boom in the post-war period or an intelligent and farsighted rebuilding of large sections of American cities as part of a comprehensive and balanced housing program?

"The answer to this question will depend in no small part upon whether we can find practical means of making available for building two types of urban districts—the deteriorating and blighted sections that are found near the centers of most urban communities and the defunct subdivisions inherited from times past."

The bulletin says that the public aids it discusses could serve to redirect and reshape patterns of city development by making central land competitive with land on the fringes, but warns that these aids of themselves will not provide low-rent dwellings.

Federal Aid Is Warranted

The rebuilding of cities is a clear concern of the states and their municipalities, the bulletin declares, but adds:

"There is a national interest in assuring every American family of a decent home in which to rear its children, just as there is a national interest in seeing that every child has the opportunity for education, basic sound nutrition, health. This national interest does not mean that the federal government should provide the schooling, the food, the medical care or the home. But the various types of federal aid may be considered to supplement the resources of the states and cities; many of these federal aids are long familiar.

"Upon these principles, federal aid is warranted to the municipality to enable it to assemble land predominantly covered with bad housing or predominantly to be redeveloped with good homes. Systematic treatment of an area may well require tearing down structures other than dwellings or the redevelopment of the cleared area for purposes other than housing. So long as the predominant purpose is housing, there is a clearly identifiable national interest warranting federal aid."

"Soverign Powers" Available

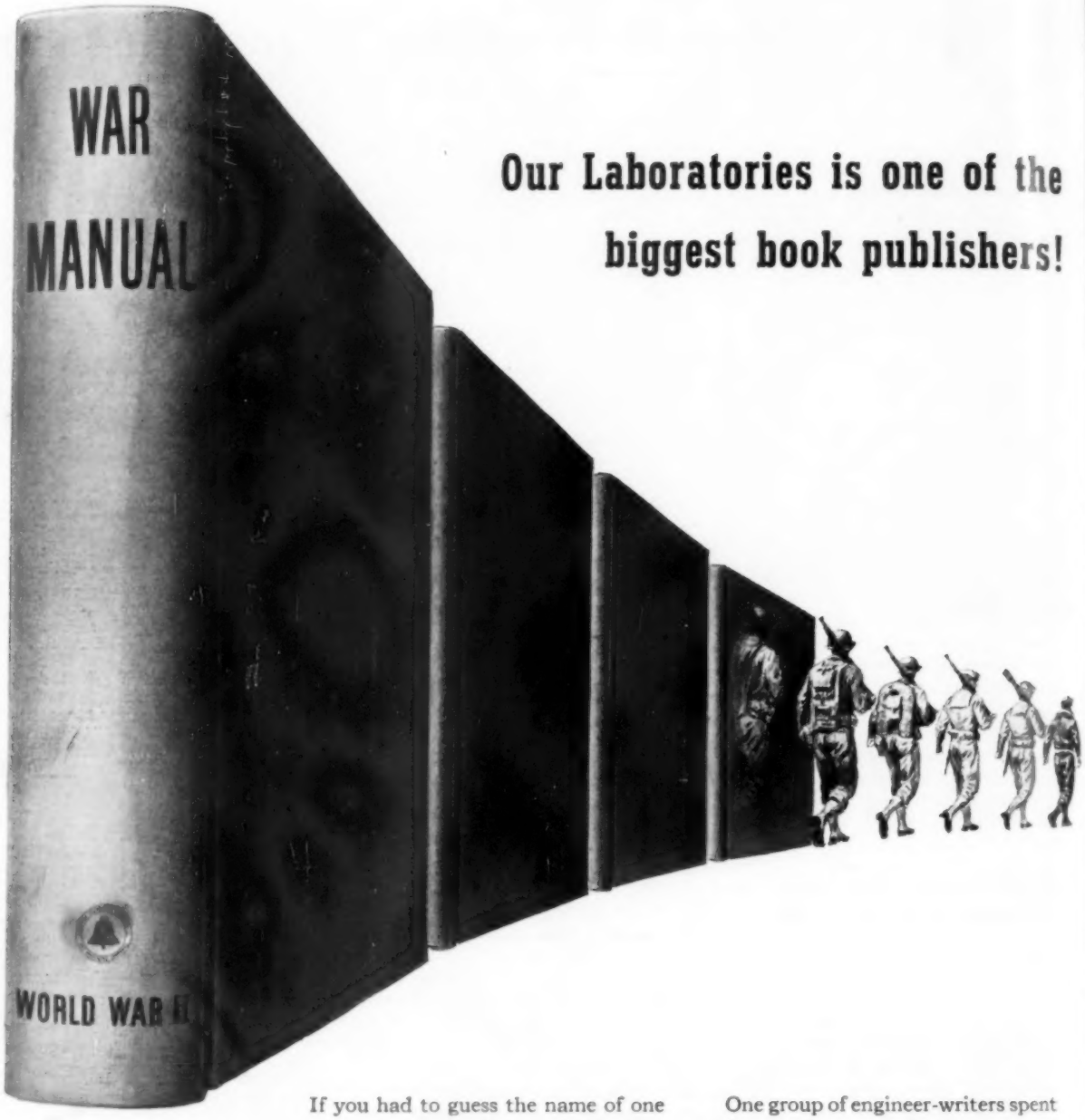
Discussing the three "sovereign powers" available for housing and which are being brought to bear in the aid of land assembly, the bulletin sets forth:

The Police Power—The application of the police power has been familiar for many years through building codes, fire and health inspection, zoning regulations. Perhaps we need a fresh sense of their full possibilities, more rigorous enforcement to compel an owner to rehabilitate his structure or tear it down. . . .

The Power of Eminent Domain—It has been recognized for some time that even intensive use of the police power would not bring about substantial land clearance. State legislatures, therefore, began to make the power of eminent domain available for urban land assembly. . . .

Taxation and Public Credit—The power of taxation may be applied to urban land assembly directly through appropriation of public funds, indirectly through tax-abatement, or indirectly through the use of public credit, possibly at lower interest and for longer terms because of the ultimate power of taxation to assure repayment of the borrowings. . . .

"The true cost of redevelopment," the bulletin declares, "is the difference between the annual charge for the money used to buy the land and the annual return from the land after redevelopment."



Our Laboratories is one of the biggest book publishers!

If you had to guess the name of one of the country's biggest book publishers, the chances are you wouldn't think of Bell Telephone Laboratories.

Yet, in the number of books prepared for publication during the past year, the Laboratories outranks the largest book publisher in the country.

Many of these—prepared for the Army and Navy—are twice the size of the average novel. Some contain 1000 pages. All contain numerous photographs and technical drawings in addition to the text.

One group of engineer-writers spent eight months on one book, a manual for a secret electronic device. Another volume, equally thick, was written by one man in five months. Still another required the full time of one writer for a year and a half.

This publishing achievement is one of the yardsticks by which the Laboratories' war contribution may be measured. That's because each book is an instruction manual to accompany equipment designed by Bell Laboratories for the Armed Forces.

BELL TELEPHONE SYSTEM

Our Municipal Notebook

Post-War Stabilization—Joint Job for Industry and Local and Federal Agencies

THE symptoms of a major depression should not be perceived for ten years after the war, but they should be, nonetheless, foreseen and provided against. The chaos following V-J Day also should be anticipated by a knowledge of (1) what to do in case of several different degrees of unemployment and (2) what to do it with. The country has been full of planning talk for three years. To what extent have the plans been made, and the plan to use the plans?

Let it be said first of all that every company making war goods should take into its confidence its workers and their unions. There is nothing to lose by putting cards—all the cards—on the table now. If the company has made, and is still making, a vigorous effort to provide itself with peacetime production, the fact will be appreciated and labor might do much to speed and broaden the plans.

Yet for all the reports that are pouring out of official and private offices, never were officials and business executives as bewildered as they are today. There is no doubt of the ability of industry to produce, but can the production give enough employment to keep consumption at a level that will maintain high production?

Because of this uncertainty there is obvious need for a stabilizer in the form of a tremendous reservoir of public works plans, drawn up and assembled primarily for the double purpose of holding the employment line and of providing needed public improvements. The American Municipal Association points out that "municipalities should finance wholly the immediately necessary public works; but public works which are properly listed in a long-term plan, if undertaken immediately to help provide jobs, should be undertaken only with financial assistance from the federal government. The point is made that employment stabilization, particularly with reference to employment of displaced war workers and returning veterans, is a joint responsibility of the several levels of government. Municipalities cannot and should not be called upon to undertake alone a large employment stabilization program by constructing public works which are not immediately needed."

This view gives promise of being the beginning of a sound approach to an understanding of what the federal government should not and should do in financing local public works and of what local governments should not and should expect in the way of federal funds for local works.

Thus, it may be said, that there should be the No. 1 file of public works projects consisting of immediately needed local improvements and the No. 2 cumulative file of projects which could be used by communities if largely financed by the federal government. These projects would not be wasted if built, but if not urgently needed when the war ends, would be held in abeyance to meet a possible threat of a post-war depression.

To state this need and to agree to it are not enough. Plans for the No. 2 file should be pushed forward. Their test is their soundness as engineering structures and conformity to sound city planning, rather than as projects for immediate local public approval. The public's approval must be obtained for this whole, broad, tried method of keeping up employment. Private initiative aided by public spending has given us wartime efficiency and brought us within sight of victory. This combination, with government less in the picture, should be capable of producing and maintaining in peacetime the high standards of living that are the desire and aim of all.

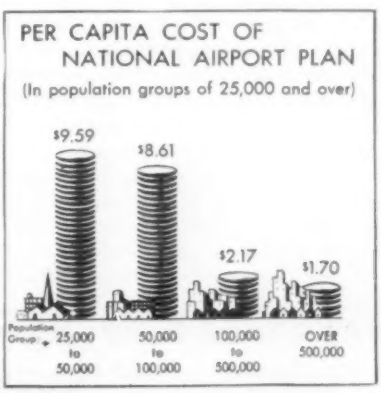
Fewer Conventions?

FIRST the crowded transportation facilities that made going to conventions difficult and then the ban on conventions of over fifty persons appear to have kicked up some doubt as to the value of annual conventions. John L. Love in *Printers' Ink* recently asked "Should the Convention Become a Permanent War Casualty?" He reports that a recent survey by a publishing house showed that the least read editorial contents in a hardware paper, a grocery paper, and a drug paper are reports on conventions. It is a fair question whether or not the same experience would be reported for a municipal government paper.

Mr. Love proposes that if conventions are necessary, they should be held every five or seven years. When conventions are permitted this magazine announces their dates and locations in every issue. Most of these municipal conventions have a technical or professional background and purpose and many of them furnish information that could hardly be gathered from printed papers sent around to the membership. These conventions, morever, are embedded in the tradition of the municipal field, as the *71st* and *49th* of the Fire Chiefs and Signal Engineers, respectively, indicate. They are good for the associations themselves, in that they are a constant source of revitalization. Mr. Love's suggestions are interesting and provocative, but the greater love of many members of a profession or society for getting out and getting together with others of their kind at least once a year seems destined to keep these meetings alive in the post-war period.

Get Airport Plans Ready Now

AIRPORTS are a type of construction which can be undertaken immediately after the war, if plans are ready, D. W. Winkelman, of Syracuse, N. Y., chairman of the Airway Facilities Committee of the Associated General Contractors of America, told the House Commerce Committee at its hearings on legislation providing for federal aid in the development and construction of a national airport system. The grading and paving of runways is a type of construction which does not use scarce materials. Some types of construction, particularly for buildings which will require such things as finished hardware, air conditioning equipment, and other facilities, cannot be completed as readily immediately after the war as can airport construction.



From a report of The United States Conference of Mayor, Washington, D. C.—"The Municipal Airport in the National Airport Program."

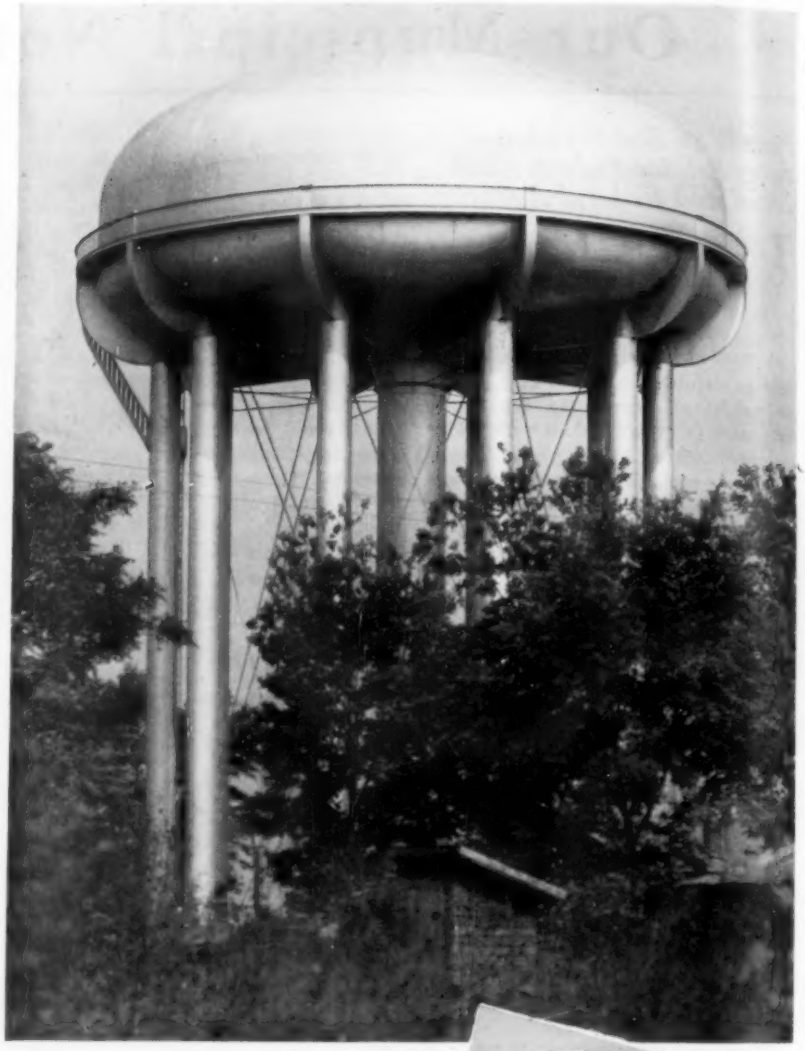
HERE IS ONE STEP TO TAKE

. . . when you want to *iron out* pressure fluctuations in a water supply system.

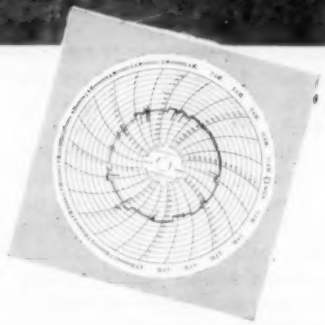
•

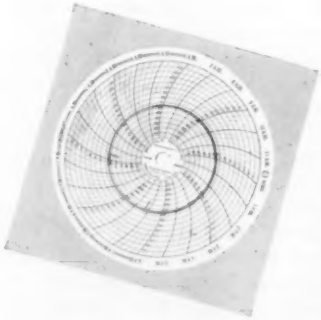
We do not claim that the installation of a Horton elevated water storage tank will automatically *iron out* the pressure fluctuation in a municipality's water distribution system. But it has been proven many times (through before and after studies of pressure charts) that elevated storage can be *the* important factor in making the pressure more uniform in water mains. Such was the case at Dothan, Alabama, where the 750,000-gal. Horton elevated storage tank shown at the right was installed a few years ago.

In addition to reducing pressure variations, the elevated tank helped the city to realize an appreciable savings in pumping. Prior to the installation of the tank Dothan's cotton and oil mill industries threw a heavy demand, during certain months, on the municipally-operated power distribution system. After the elevated tank was placed in service, it was possible to keep the pumps shut down during the day and do all pumping at night. This enabled the city to realize a saving of approximately $185.00 per month for three months in the fall and a proportionate savings the remaining months.



BEFORE . . . *Chart at right shows the pressure in the Dothan water system before the new tank was placed in service.*





AFTER . . *Chart at left shows the pressure in the water system after the 750,000-gal. Horton radial-cone bottom tank was placed in service.*

CHICAGO BRIDGE & IRON COMPANY

Birmingham 1.....1502 North Fiftieth Street
Houston 1.....5601 Clinton Drive
Tulsa 3.....1625 Hunt Bldg.
New York 6.....3308—165 Broadway Bldg.
Cleveland 15.....2236 Guildhall Bldg.

Chicago 4.....2127 McCormick Bldg.
San Francisco 11...1233-22 Battery St. Bldg.
Philadelphia 3...1616-1700 Walnut St. Bldg.
Los Angeles 14.....1403 Wm. Fox Bldg.
Washington 4.....703 Atlantic Bldg.

Plants in BIRMINGHAM, CHICAGO and GREENVILLE, PENNSYLVANIA

Water Works

New A.W.W.A. President

ON July 1 Leonard H. Thompson took office as President of the American Water Works Association. He has been a member of A.W.W.A. since 1929 and last year served as Vice-President with Samuel F. Newkirk, whom he now succeeds.

Mr. Thompson was born in St. Paul and was graduated from Ripon College in 1911. He served as Engineer for the Omaha Railway and the St. Paul Water Department; Designing Engineer for the U. S. Air Service in 1919, returning as Designing and Construction Engineer for the St. Paul Water Department from 1920 to 1928; and during 1927 and 1928 he served with the contracting firm of D. W. Moore & Thompson. In 1929 he became General Superintendent and Engineer for the St. Paul Water Department, and March 1, 1945, became General Manager.

Successful Type Well

WILLIAM D. WHEATLEY, chemist for the Pittsburgh Plate Glass Company's water works plant at Crystal City, Mo., which supplies water to Crystal City, reports that in October 1941 they installed a Ranney well which has since been supplying water in a very satisfactory manner.

Of this well, he says, "It consists of a large caisson 13 feet in diameter with an 18-inch concrete wall, sunk 80 feet to bed rock with a 48-inch concrete bottom. Four feet from the bottom 8-inch pipes are pushed out in the manner of spokes extending out from a hub. These pipes are of toncon alloy and vary in length from 50 to 200 feet. They have 3/8-inch by 1 1/2-inch slots throughout their length and circumference.

"The chief benefits to be derived from this type of construction lie in the fact that in pushing them out all silt and fine materials within a 3-foot radius are washed out, leaving a very porous shell around the pipe which reduces silting to a minimum. The usual difficulty caused by precipitated iron is also eliminated because the pipes are never exposed to the air and consequently the iron does not precipitate until it enters the large caisson or well proper."

Water Works Manpower Savings

ONE of the ways in which municipalities have been able to supply the needed manpower to the vital water works department has been by permitting employees of other agencies to help the water works department, according to Samuel F. Newkirk, Jr., Superintendent, Board of Water Commissioners, Elizabeth, N. J., speaking at one of the recent meetings of the New York Section of the American Water Works Association held throughout the state during May. Other methods of conserving manpower used during the emergency may be classified under six headings.

1. Simplifying the job.
2. Introducing short cuts.
3. Improving working conditions.
4. Reducing absenteeism and turnover.
5. Using women, older persons, and the handicapped.
6. Employing labor saving mechanical equipment.

Variations of many of these methods have been tried by municipalities throughout the country. Their experiences may well help others until more manpower becomes available, and many of the procedures might well be carried over after the war to provide more economical operation.

Some of the experiences of various municipalities as reported by Mr. Newkirk are:

Hyattsville, Md., has installed four one-way radio sets by which complaints are being met with great speed. Their use has been so successful that the commission is planning to acquire eight two-way sets when priorties permit.

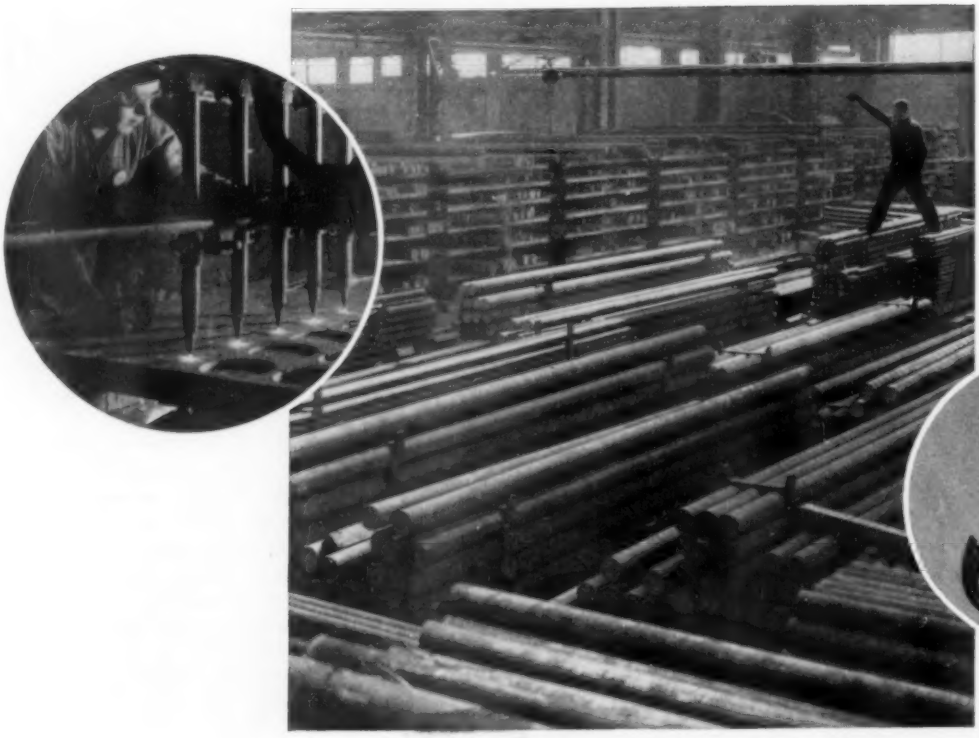
St. Louis, Mo., has put many of its employees on an hourly basis, which, though it rules out such benefits as paid vacations and sick leaves, compensates for these privileges by increased pay. Time and a half is paid for overtime. This system has proved successful in getting more work done and in reducing absenteeism.

Cleveland, Ohio, found it expedient to pay its salaried pipe repairers overtime in order to permit them to finish pipe repair jobs which were just short of completion at the end of the day.

Others are employing a more extensive use of such equipment as trenchers, cranes, and air compressors. Using such equipment, *Newport News* reports, they were able to operate a pipe line crew with about one-third the former personnel. *Augusta, Me., Cheyenne, Wyo., and Bridgeport, Conn.*, also report marked savings by such means. *Butte, Mont.*, has a 3/8-yard Michigan truck with a shovel mounted upon it, a crane attachment, and a trench hoe. It is used for trenching, backfilling, pipe laying, cleaning reservoirs, snow removal, road building, pile driving, and numerous other jobs. Wade Plummer, General Manager of the water company at Butte, reports that this device does the work of from five to twenty men depending on the job. *St. Petersburg, Fla.*, has a frame set up on a truck with a winch; *East Chicago, Ind.*, has a boom and power winch on a truck; *Denver, Colo., Philadelphia, Pa.*, and *Hartford, Conn.*, contract for their trenching and backfilling work.

Some water works have reduced their manpower needs by simplifying and mechanizing the handling of their chemicals. Another installed a jet pump at its intake to keep it clear of ice, a task formerly requiring several men.

The length of time between meter readings have been lengthened in many places. *Indianapolis, Ind.*, has a novel method of meter reading. It sends a calendar to its water users in outlying areas which has at the bottom a detachable postcard marked with the date the consumer is to read the meter. This system has worked well. Many other places have adopted new billing methods which save time and reduce the number of employees needed. In many cases bills which were formerly distributed by hand are now mailed.



4 Things to Know About Steel

1. **Where to Get the Steel You Need**—The thousands of kinds, shapes and sizes of steel in eleven Ryerson Steel-Service plants are still the largest, most complete stocks available anywhere. This means that, despite shortages in some sizes, you can be more certain of getting the steel you need from Ryerson.

2. **Technical Service**—For more than 100 years Ryerson has supplied steel promptly from stock. During that period, Ryerson technical men have gained much practical experience about the best type of steel for each municipal requirement. This service is available to you on any problem of selection or fabrication.

3. **Fast, Accurate Preparation**—Ryerson saves you time and expense—prepares steel to your exact specifications with modern, precision equipment. Facilities include high speed hack saws and shears, batteries of flame cutters, punches—everything needed to cut steel to the size and shape you need in the shortest possible time.

4. **Prompt Delivery**—Whether you need a single piece of steel or several tons you'll get prompt action from the nearest Ryerson plant. Phone, wire, or write for any steel requirement. And if you do not have a copy of our latest Stock List and Steel Data Book, we'll be pleased to send one.

RYERSON STEEL-SERVICE TO MUNICIPALITIES INCLUDES:

Steel Bars, Mild Steel, Alloy, Stainless—Rounds, Squares, Flats—Hot Rolled and Cold Finished—Shafting, etc.

Structural Steel including I-Beams, Angles, Channels, Tees, Zees.

Plates and Sheets—all kinds including plain, galvanized, corrugated for roofing, siding, etc.

Inland 4-way floor plate and stair treads for safety, rigidity and long life.

Boiler Tubes and Fittings.

Mechanical Tubing—Seamless Steel.

Hi-Bond Concrete Reinforcing Bars, Wire Mesh and allied building materials.

Allegheny Stainless Plates, Sheets, Strip, Bars, Tubing, etc.

Alloy Steels, Tool Steels.

Welding Rod, Babbitt, Solder.

Bolts, Nuts, Washers, Rivets, etc.

Metal Working Machinery and Tools.

JOSEPH T. RYERSON & SON, INC., Steel-Service Plants: Chicago, Milwaukee, Detroit, St. Louis, Cincinnati, Cleveland, Pittsburgh, Philadelphia, Buffalo, New York, Boston.

RYERSON STEEL

Sewerage and Sewage Treatment

Topeka Approves Use of Fiber Sewer Pipe

TOPEKA, KAN., has recently approved the use of Orangeburg Fibre Conduit pipe for residential sewer connections, according to W. E. Baldry, city engineer. This pipe was chosen mainly because it is easy to install. In Topeka where the labor shortage is critical, particularly in the field of plumbing service, this was an important consideration.

The city approved this product, Mr. Baldry states, on April third of this year, but limited its use to service in houses not exceeding four-family apartments and did not approve its use in industrial or commercial service. The use of the conduit is at present restricted to not more than six inches in diameter.

City Engineer Baldry lists as another important advantage of this type of pipe its ability to exclude root growth which customarily penetrates the cement joints in vitrified clay pipe; it is slightly higher in first cost, but its installation is cheaper since less labor is required; it is much less expensive than cast iron and yet possesses some of the advantages of a cast iron pipe.

Recent Sewerage Developments in England

AT the conclusion of the last world war, the activated sludge system and sludge digestion were in their infancy, and during the period between the two wars many good examples of both processes have been constructed in England, as well as in other countries. Undoubtedly they will continue to be applied in post-war design.

Among the new processes available for development, the various applications of percolating filter are the most important. All of them aim at high rate dosing and most of them—after settlement—produce final effluents of good quality. These percolating filter processes include:

1. High rate primary or "colloidal" filter
2. Double filtration with periodic change in order of operation
3. The enclosed filter with forced aeration
4. Recirculation or biofiltration
5. Dilution with nitrated effluent prior to filtration

With regard to sludge disposal, digestion followed by drying on ash beds is still unrivalled in popularity here. Several new processes are being investigated. A more intensified method of dewatering sludge, unaffected by climatic conditions, would also be highly desirable.

The Rothamsted Agricultural Experimental Station has been investigating the possibility of utilizing sewage sludge for manurial purposes and it is hoped that the results of the experiments will enable some competent authority to place a market value on the various types of sewage sludge produced, both for the guidance of the farmer and of the local authority.

Among the greatest problems facing this country is the shortage of houses, and everyone agrees that housing development must take precedence over all other post-war developments; the effect this will have upon sewage treatment must receive the same urgent consideration.

While nobody can say how long the housing development will continue before the saturation point is reached, there is much to be said in favor of designing the sewage works in two or more complete units. With this arrangement, one unit can be completed and in operation while the second one is under construction, and the capital and maintenance charges incurred will increase in some reasonable proportion to the rateable value of the estates.

From an address by James H. Edmundson, President, Institute of Sewage Purification; General Manager, Sewage Department, City of Sheffield, England; given at annual general meeting, Institute of Sewage Purification, Birmingham, England, December 1944.

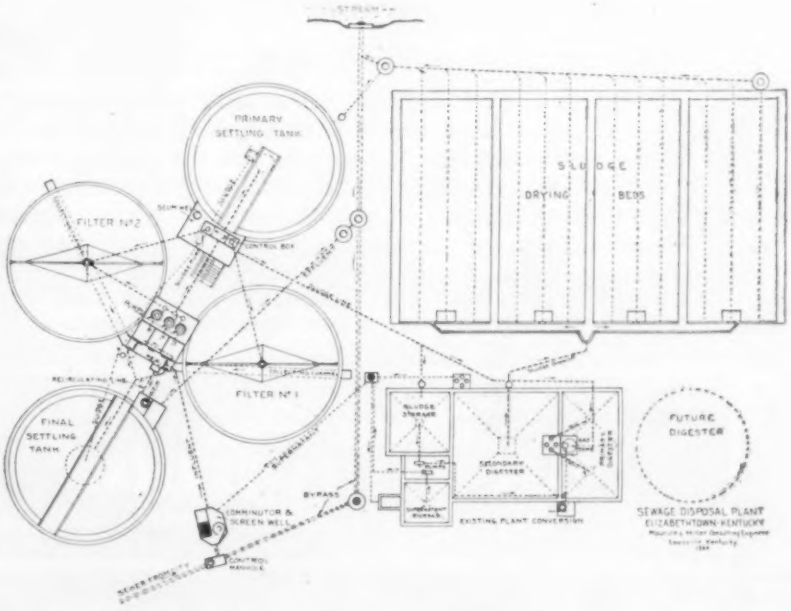
Columbus, Ga. To Get New Trunk Sewer

PLANS and specifications for a sanitary trunk sewer line of approximately 2.3 miles length are now in progress at Columbus. The line will connect with the new housing project sewer in Weracoba Creek, running from 10th Avenue and 10th Street to Cherokee Avenue and Slade Drive and will consist principally of 18- 21- and 24-inch pipe. Costing about $76,180, the work will be done with FWA aid.

J. M. GRADDY,
City Engineer, Columbus, Ga.

Ralph F. Gates, Governor of Indiana, has designated August 13 to 20 "Stream Improvement Week" to foster a constructive attitude toward the elimination of stream pollution.

Elizabethtown's New Sewage Treatment Plant



This is the layout of the new sewage treatment plant at Elizabethtown, Ky., about which a story appeared in the June issue of THE AMERICAN CITY *on pages 80-81. This new bio-filtration type plant went into operation this spring.*

Anyway You Look at it . . .

PARK-O-METER tells Its Own Story

These external details are indicative of the advanced engineering, mechanical refinements, and improved design which make the PARK-O-METER a unit that meets every operation need.

. . . and FIRST again . . .

The parking meter was first conceived by this organization. The first manually operated meter was built by us. We were first to abandon manual operation and adopt the automatic meter . . . and now first to offer a UNIVERSAL parking meter adapted to meet every operation requirement — adjustable for any coin combination or time limit.

For complete information and assistance in planning your improved Parking Meter System . . . write:

Magee-Hale
PARK-O-METER COMPANY
COMMERCE EXCHANGE BLDG. • OKLAHOMA CITY 2, OKLAHOMA

MACNICK COMPANY, *Manufacturers*, TULSA, OKLAHOMA

Refuse Collection and Street Cleaning

The polishing effect in street cleaning in Washington is accomplished by this Autocar truck equipped as a street flusher.

Good Organization Pays

IN PLANNING garbage and refuse collection and street cleaning services, organization is of paramount importance. Even if you are short of equipment and men, you can still do a good job if you organize carefully, according to William A. Xanten, Supervisor of Refuse Collection and Street Cleaning, Washington, D. C.

Garbage and refuse collection is made easier, Mr. Xanten points out, if the householder can be persuaded to separate the refuse. Householders in Washington make three separations: one for garbage, one for ashes, and one for all other trash. The garbage is hauled to a transfer point where it is loaded into railroad gondolas and shipped to a rendering plant or given to farmers for hog food. Ashes are hauled only a short distance to a number of dumping grounds where their presence does not create a nuisance. Burnable trash goes either to an incinerator or to the dumping grounds where it is disposed of by the controlled open incineration method. If this refuse were lumped together, the city would have a serious disposal problem because of the absence of any appreciable amount of low ground within a short hauling distance.

Street cleaning, Mr. Xanten states, must also be systematized and should not be organized so that street cleaning crews have to do the work of garbage and refuse collection. Street cleaning is a trade in itself and should be organized as such.

In the District of Columbia, street cleaners collect an average of 120 truckloads of sweepings daily. If a heavy snowstorm prevents the sweepers from working, they have to make up lost time on following days. "At times this makes the job pretty messy," Mr. Xanten admits, "after a little spell of bad weather we often find that our sweepers have more than they can handle. Leaf season also presents a heavy street cleaning task and scheduled cleanings fall behind."

Flushers should not be made to do the job of sweeping, according to Mr. Xanten. Flushers give the street a final polish but cannot be expected to get the heavy dirt or actually to clean the gutter. They wash the dirt to the gutter to be picked up by the sweeper.

The District of Columbia street-cleaning crews include 220 whitewings and gang cleaners, using 32 trucks; 36 men assigned to alleys using fourteen trucks; and ten flushers. These crews care for 968.67 miles of streets based on 30-foot width and 376 miles of alleys. In downtown areas the crews will clean the streets as often as six times a day, while in outlying areas streets may be cleaned only once a month.

Snow Cleaning at Danvers

THE winter of 1944-45 was exceptionally severe in this vicinity making snow removal unusually difficult, for we have more than 100 miles of streets to keep clear beside cemetery, hospital, and school driveways. Funeral homes and homes where death has visited are given special attention whenever it is possible, and we had to use our tractors to help out dairy farms and institutions that found it impossible to hire equipment to cope with the heavy drifting. Fourteen pieces of equipment take care of all this work including a No. 12 Caterpillar motor grader and a large and small tractor of the same make. This year was the first that we have had to use the V plow on the grader. This piece of equipment alone takes care of approximately 14 miles of streets, some of which are the most difficult to clear.

In some instances our Insley shovel, equipped with a snow bucket, proved very efficient in loading trucks, especially where snow was hard packed.

By going along with the storm at the beginning we have been able to keep all streets passable during the storm and attain nearly normal conditions shortly after the storm has ended.

WALTER G. ENNIS
Street Superintendent
Danvers, Mass.

Caterpillar Diesel No. 12 Motor Grader with snow plow and wing, widening snow-covered street in Danvers, Mass.

Incinerator Planned

A NINE-HUNDRED-TON incinerator is planned for New Orleans, La., according to a report of Michael J. Kelly, Deputy Commissioner of the Division of Public Works of that city. It is expected to be one of the largest in the United States.

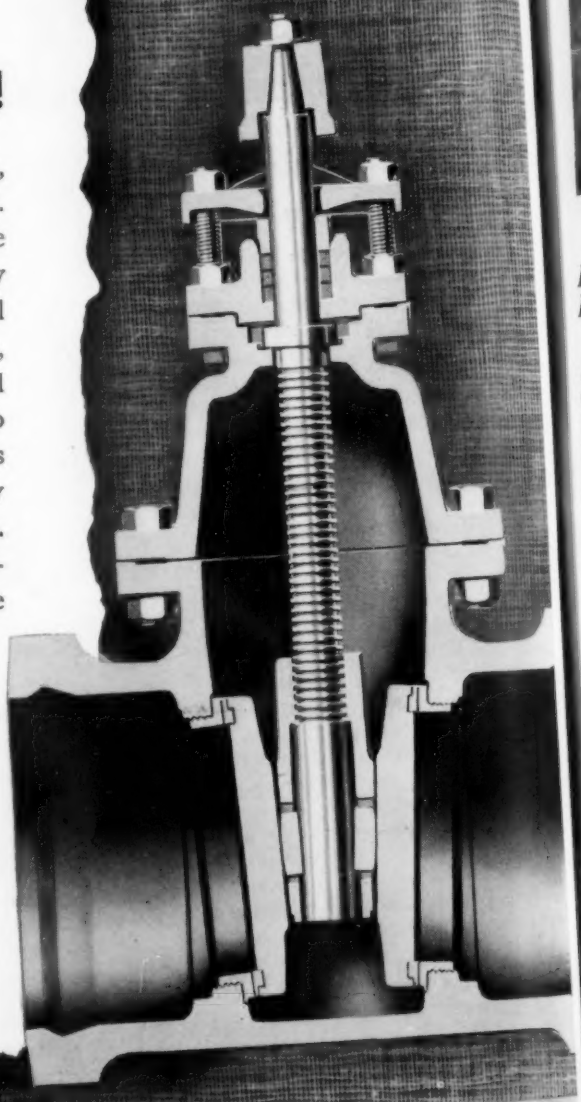
Several sets of preliminary plans were prepared as studies under the direction of Carl Schneider, Consulting Engineer for the Division. The actual drawings for these studies were made by the office of Herbert A. Benson, architect, New Orleans, La. Detailed plans for the equipment are being drawn up by the Nichols Engineering and Research Corp., of New York, and further designs are being prepared by Mr. Benson. Mr. Schneider will continue as consulting engineer.

The plant will have six 150-ton Monohearth furnaces served by two chimneys 200 feet high. It will be of the receiving pit type with crane and grab bucket feed. Site and method of financing remain to be worked out. Application for funds for the detail plans will be made to the Bureau of Community Facilities, Div. 6, F.W.A.

ALL SET FOR LIFE!

Gate-valves, buried deep in the earth, are no problem when made by R. D. Wood. These smooth controllers of the water-flow are dependable workers. They have only three parts in the internal mechanism. No little rods, links, screws, or other parts to get out of order and jam the mechanism. No pockets to catch sediment or scale. And the valves are fully bronze-mounted to insure easy operation . . . for any number of years. R. D. Wood gate-valves meet all requirements of the A.W.W.A. and are tested to 300 pounds hydrostatic pressure. They are available in sizes from 2″ to 30″ and can be furnished either with bell-ends, flanged ends, spigot-ends, or other standard ends. For rugged strength; and simple, workable design, specify R. D. Wood gate-valves.

• BLUEPRINT NOW



R. D. WOOD COMPANY

400 CHESTNUT STREET, PHILADELPHIA 5, PA.

MANUFACTURERS OF MATHEWS HYDRANTS AND SANDSPUN PIPE (CENTRIFUGALLY CAST IN SAND-MOLDS)

Established in 1803

Public Safety

Backpack fire pumps in use at Waynesboro, Ohio, fighting bush fires rapidly and efficiently.

Fires That Hand Pumps Douse

A LARGE hill adjacent to our town of 1,200 population burns off every year. We used to fight this fire for hours but we now extinguish it in a half hour with Indian fire pumps. We bought five of them five years ago, and, finding them indispensable, we bought ten more and last year added eight, bringing our total to 23 backpack pumps. Assistant Fire Chief C. A. Gottsman and myself are Deputy State Forest Fire Wardens. While our main use of these hand pumps is to control grass and forest fires, we use them many times in house fires which have not yet had much of a start, thus preventing extensive water damage. The first men into a building take Indian pumps and are followed up with booster lines. Also when a fire is nearly out we use these pumps to clean up what remains of it. They are particularly effective on roof fires of all kinds, because they are quick and they leave a man with both hands free for climbing a ladder.

N. W. BANKERT
Chief, Fire Department,
Waynesboro, Ohio.

Do Any Other Cities Have Busier Rescue Squads?

"WARFARE Against Fire and Crime," in the April 1941 issue of THE AMERICAN CITY mentioned that in Chicago "ten open rescue trucks were replaced by ten enclosed Mack trucks which can turn on a circle of 44 feet diameter." What have they been doing these four years? Well, in 1944 they made 17,237 runs for a total of 60,964 miles.

According to a report sent to Fred W. Beardslee, manager of Mack's fire engine sales, by Anthony J. Mullaney, chief fire marshal of Chicago, the Macks attended 11,061 fires and worked a total of 3,699 hours.

Squad wagon No. 3 made the most runs, 2,713, of which 2,215 were to fires, and put in the greatest number of hours worked, 772.50. However, apparatus No. 5 rolled up the greatest mileage, 10,920.7, while making the third highest number of runs, 2,185.

The squad units carry a crew of seven men who ride comfortably in the large cab, which is equipped with lockers holding all varieties of life saving apparatus. In addition to the first aid and entry equipment, the trucks are equipped with turret nozzles capable of shooting 1,000 gallons of water a minute, so that each truck can be used directly against fire while its crew is performing rescue work.

One of Chicago's Squad Wagons

Once the windshield had been cleared, this big Windy City ice-covered squad wagon made the trip back to the fire house under its own power according to Chief Fire Marshall A. J. Mullaney of Chicago.

HOW A B-G SNOW LOADER

CLEARS STREETS SPEEDILY AND CHEAPLY

This Barber-Greene machine doesn't just push snow from one place to another—it *removes* the snow from your streets *completely*. And, you can clear thoroughfares quicker and more economically with the B-G Snow Loader than any other way.

Actually, a B-G Snow Loader often pays for itself in a single operation—*in truck time savings alone*. In addition, it will replace scores of hand shovelers by loading up to 20 cubic yards of windrowed snow a minute, hour after hour.

There's no need to pamper a B-G Snow Loader. Full crawler mounting makes it sure-footed on the slipperiest streets. Notched spirals eat through icy chunks and packed banks easily. An Automatic Overload Release protects the loading mechanism when hidden obstacles are encountered.

B-G Snow Loaders have many other advantages too: high discharge for high-sided trucks, variable crowding speed, floating boom, tank-type chassis, low traveling clearance, easy operation. Best of all, by merely replacing the boom, it can be converted into a B-G Bucket Loader for year round utility in material handling jobs. Barber-Greene Company, Aurora, Illinois.

Barber-Greene B G *Constant Flow Equipment*

Vol. LX, No. 8 **The American City** *August* 1945

Modern Methods of Mosquito Control

What cities can do to help stamp out the threat of mosquito-borne diseases presented by the war

J. LYELL CLARKE
Sanitary Engineer
The Des Plaines Valley Mosquito Abatement District
Chicago, Ill.*

MOSQUITO CONTROL is good and efficient during wars, but after the war it will probably fall by the wayside again. Industrial concerns will carry on, but small communities will lack the knowledge to do so. Yet this need not be so, for cities have shops, tools, trucks, excavating machinery, and tree sprayers; oil, pyrethrum, and DDT will soon be available. The desire of the people to have mosquito control at this time is genuine and clamorous. City activities, multitudinous as they are, can be coordinated to include mosquito control; the element that is lacking now is scientific and practical knowledge, but, as soon as the war is over, that too will be present in good and ample measure. The returning service men from the mosquito control units of the Army and Navy will come home to all parts of the United States with their knowledge and techniques ready for use.

Thus, it behooves the cities all over the United States to consider the problem of mosquito control from two points of view. One, to carry on mosquito control as a routine procedure in order to reduce biting annoyance; and second, to be set in readiness to stop an epidemic of any of the mosquito borne diseases. The work should be supported by a small annual tax.

In fourteen states mosquito abatement legislation has been passed which permits the formation of mosquito abatement districts of size ranging from cities to one or more counties. Such legislation provides for an annual levy of several mills on the dollar valuation of real estate to support the work. Such legislation is particularly desirable in coastal states where salt water marsh mosquitoes produce in prodigious numbers and fly as far as thirty miles inland.

Cities should map the principal mosquito breeding areas within their territorial limits, and the large breeding areas within flight range of the city and suburbs. In some cases this would mean large breeding areas within a radius of fifteen miles. In the Chicago area several important species have been shown, by staining experiments conducted by the author, to fly fifteen miles from their breeding places to the heart of populated areas. A mosquito abatement district should be organized in order to obtain authority to eliminate large marsh areas on private property within range.

The Corner Cutter for spraying catch basins where mosquitoes of the house-entering autumn group often breed.

The first thing, and the most sensible thing to do for the first five years after the war is to concentrate upon the malaria carrying mosquitoes. Prior to World War II very few persons in the northern states had malaria parasite in their blood, but during the next five years 2,000,000 soldiers will return to all parts of the United States laden with malaria parasites, and these new strains of malaria are of a more virulent type than the ones already here; therefore, the few malaria mosquitoes which breed in garden pools in the cities will be sufficiently numerous to cause sporadic outbreaks here and there in cities and villages all over the greater part of the United States, from Montana to Massachusetts, and from Oklahoma to Virginia, and West of the Rockies from California to Oregon.

Fortunately malaria will not persist in the large cities more than several years, as the chain of transmission is too flimsy to maintain itself when the returning chronic cases have been cured by quinine, atabrine, good food, and rest.

Mosquito-borne diseases will not play a disturbing role in northern cities from Oklahoma to Virginia north as a post-war problem. Therefore city health officers there will not be justified in initiating mosquito control programs of their own, not even an

* District Headquarters at 8130 Ogden Avenue, Lyons, Ill.

The Swamp Angel is used in water too shallow for the boat sprayer

anti-anopheline campaign to prevent malaria, and certainly not a campaign against the vectors of yellow fever, dengue, or filariasis. The only pretext would be to prevent some form of encephalitis.

In the south, where optimum conditions prevail for both mosquito propagation and parasite, the malaria rate will rise sharply, if drastic measures are not taken by the states, under a coordinated plan directed by the federal government. Such a plan has already been initiated—a plan so old and tried that it cannot fail if carried out on a large scale and forceful manner. This old plan has worked time and time again on small projects, but it has never been tried on a wholesale manner. And it could not be initiated now except for the discovery of the miracle drug, DDT. It consists of killing the adult mosquito after it has taken a blood meal, but, in that twelve-day period before it has had a chance to become infective. The procedure is to spray the walls of dwellings in the highly malarous areas so that the mosquito biting a person and flying to the ceiling or wall, will come in contact with DDT and die.

Ten million dollars per year will be spent in the south during the next several years to carry out this program. Can it be carried out by state cooperation as now planned, should the Army do it, or should it be left to the lowest bidder among a group of nationally recognized general contractors?

Types of Mosquitoes and Their Control

For the benefit of the community manager or official who wants to initiate mosquito control in his community, the following facts are set down, so that he may plan and estimate costs before presenting a program of mosquito eradication to his government.

For the purpose of applying control measures, the mosquito fauna of a region may be divided into three general groups—those that occur in the spring, those that occur in the summer, and those that occur in the autumn. As the breeding habits of each of these groups are so much alike, control measures designed to eradicate any one in a group may be applied to all in that group.

Spring Mosquitoes—The spring mosquitoes breed in early woodland pools formed from the melting snow. They lay their eggs in depressions. The eggs hatch the following year, being limited to one large annual brood in May or June. They have a short flight range, seldom venturing from woodland areas. This group of mosquitoes may be controlled by draining woodland pools. Shallow swale ditches should be constructed to allow excess surface water to be removed, but not deep enough to lower the water table upon which trees, shrubs, and early flowers depend. Likewise, in spraying these early woodland pools, pyrethrum larvicide should be used so as not to harm the early spring flowers. The species most representative of this group is Aedes stimulans.

Summer Mosquitoes—In June and July, when long wet spells come with the greatest frequency, and the water which floods the bottom lands, marshes, and field pools is very warm, conditions are at their best for the production of hordes of floodwater mosquitoes. In such areas they produce at the rate of ten million mosquitoes per acre.

The species which typifies this group is the Aedes vexans. It is a medium sized mosquito, often considered small. Its eggs are deposited on marsh lands where they remain for several years.

The summer or floodwater mosquitoes may be controlled by major drainage, such as the deepening, widening, and straightening of main streams to prevent flooding of bottom lands, by digging wide, shallow ditches to drain prairie pools and marshes, and the installation of farm drain tile to avoid large deep ditches. Equally important is the application of naturalistic methods in which fish and other insects are given increased opportunity to prey upon mosquito larvae, converting marshes into lakes or ponds; or by dredging marshes to create lagoons and wildlife oases.

These marsh mosquitoes have an unusually long flight range. They fly for a distance of 15 miles from their breeding places in numbers large enough to cause severe annoyance.

Autumn Group—In autumn, when ponds and streams are at a low

(Continued on page 95)

A water-borne spraying unit used in streams

Seashore Recreational Plant Pays Well

The Municipal Lido at Sarasota is glamorous and popular

By JOSEPH LAWREN

SARASOTA is credited with only 11,141 population by the Federal census of 1940. Yet this Florida municipality possesses one of the finest and most elaborate municipally owned and operated beach installations in the United States. Despite its munificence and magnificence, it is a source of income to Sarasota.

Sarasota has always been outdoor and sports conscious. It was here that J. Hamilton Gillespie laid out in 1885 the first golf course in America—as well befits this Scottish-founded city.

It was only natural that when the depression hit Sarasota its inhabitants should have looked to its outdoor recreational facilities to help take up the slack in employment. In 1938, the city voted to issue $40,000 in bonds to augment $50,000 taken out of the tax fund to match $160,000 in funds provided by the Federal Government. With the $250,000 Sarasota built the Lido. Planned by Ralph W. Twitchell, architect of Sarasota, it arose in all its black and white gorgeousness on the snow-white and hard-packed sand of Lido Key, three miles from the city across the Ringling Causeway.

When the Lido was finished in May 1940, its magnificence stunned even the dwellers of Sarasota. Indeed, it was feared that it could not be successfully municipally operated, and the large outlay necessary to furnish the various recreational installations, including the bar, night club, and dance hall, seemed so formidable that it was leased to a private operator. His $60,000 in furnishings are a credit to his good taste.

Seeing in the Lido an opportunity for appealing to the multi-millionaire, millionaire, and near-millionaire, the lessee operated it as an exclusive and high-toned center of recreation for the socially select and elect. A year's operation, however, convinced the lessee that millionaires, especially in the depression period, were few and far between along the Florida strands. When the lessee went bankrupt Sarasota had the Lido, a veritable white elephant, on its beautiful shoreline. It was then that Mayor E. A. Smith made up his mind that the one to ride the white elephant was Charles Herring, then Director of Recreation at Daytona Beach, Fla.

So one midnight Mr. Herring was awakened by the clamor of his telephone. At the other end was Mayor Smith's imperative voice: "Sarasota has decided to run the Lido itself and you are it."

Children's wading pool at the profitable beach installation owned and operated by Sarasota, Fla. The fresh water swimming pool is shown on the cover of this issue. There are sixty cabanas, a swimmers' grill, dance hall, night club, and bar.

No Burden with This Song

Mr. Herring has been "it" ever since he received the command. The city acquired the tasty and sumptuous furnishings for the proverbial song. But most Sarasotans feared that the Lido would prove a burden for a long time. They didn't know the new director. The Mayor, however, was convinced that he had chosen the right man.

When Mr. Herring took charge, he decided to reverse the previous lessee's policy. He was determined to retain the night club, dance hall, and lounge, but its doors were to be wide opened to those of modest means. Its liquor dispensation was not to be dispensed with, however, and so it is that the city of Sarasota is one of the very few municipalities—if not the only one—in America which is in the night club business. And many believe that if other cities were to follow Sarasota's example, the liquor problem would be a long way on the road to solution.

Sarasota has earned enough from the Lido since it took over to not only pay for its original bond issue, but to help the city in other municipal activities.

The Lido is under the supervision of Sarasota's able Park Board. Members of it include Karl Bickel, the former president of the United Press; Samuel W. Gumpertz, whose successful management of large circus and other enterprises is nationally known; and Col. Robert Newall, the radio sports commentator. Their combined business and sports knowledge has been placed at the disposal of Sarasota and Mr. Herring, with the result that the Lido is one of the best managed and successful recreation installations in this country.

Sources of Income

The income of the Lido comes partly from sixty cabanas which are rented or leased out by the day, week, month, or year, totalling a yearly income of $12,000. The bath house which charges for its services to the bathers from 25 cents to $1 a day, treats its customers to the magnificent beach of 1,360 feet in length and 150 yards in width, to the splendid fresh water swimming pool, its delightful children's wading pool, a fine fresh water swimming pool, and to its rarely failing sunshine. (See front cover of this issue.)

There is a popular bather's grill where soft drinks and sandwiches may

(Continued on page 127)

Post-War Plan Fills Wartime Water Need

By H. E. SMITH
Superintendent, Water Board
Adrian, Mich.

The new Adrian water plant just after it went into operation before grading had been completed. Tree at the end of the settling basin has since been removed. In the foreground is Bent Oak Dam and the outlet from Lake Adrian.

ADRIAN, MICH., has had good reason to be grateful for its foresight in anticipating an increased need for water. In 1943 plans were started for a post-war water treatment project; by May of that year, when preliminary plans were completed, the consumption of water in Adrian had risen so sharply that it was necessary to increase the supply. Here is the way Adrian's water plant was developed so that it could meet the increased demand for water.

The original water works system of the city was constructed by a private company in 1883. In 1920 the city purchased the system as a municipal project. The water supply had been derived for a good many years from Wolf Creek, a tributary of the Raisin River. Wolf Creek flows through the northern section of the city and joins the Raisin River within the city limits. In 1941, in order to conserve the water supply in the river and provide a reserve, the city constructed a dam across the creek. This dam, named Bent Oak Dam, impounded approximately 300 mg of water. The filter plant which served the city in 1941 was originally constructed in 1898 and had been remodeled in 1914.

In 1940, Adrian's population was 18,500. During that year most of the town's industries converted to war production and in 1942 the Defense Plant Corporation constructed a large aluminum extrusion plant there which went into production late in the summer of 1943, nearly two years ago.

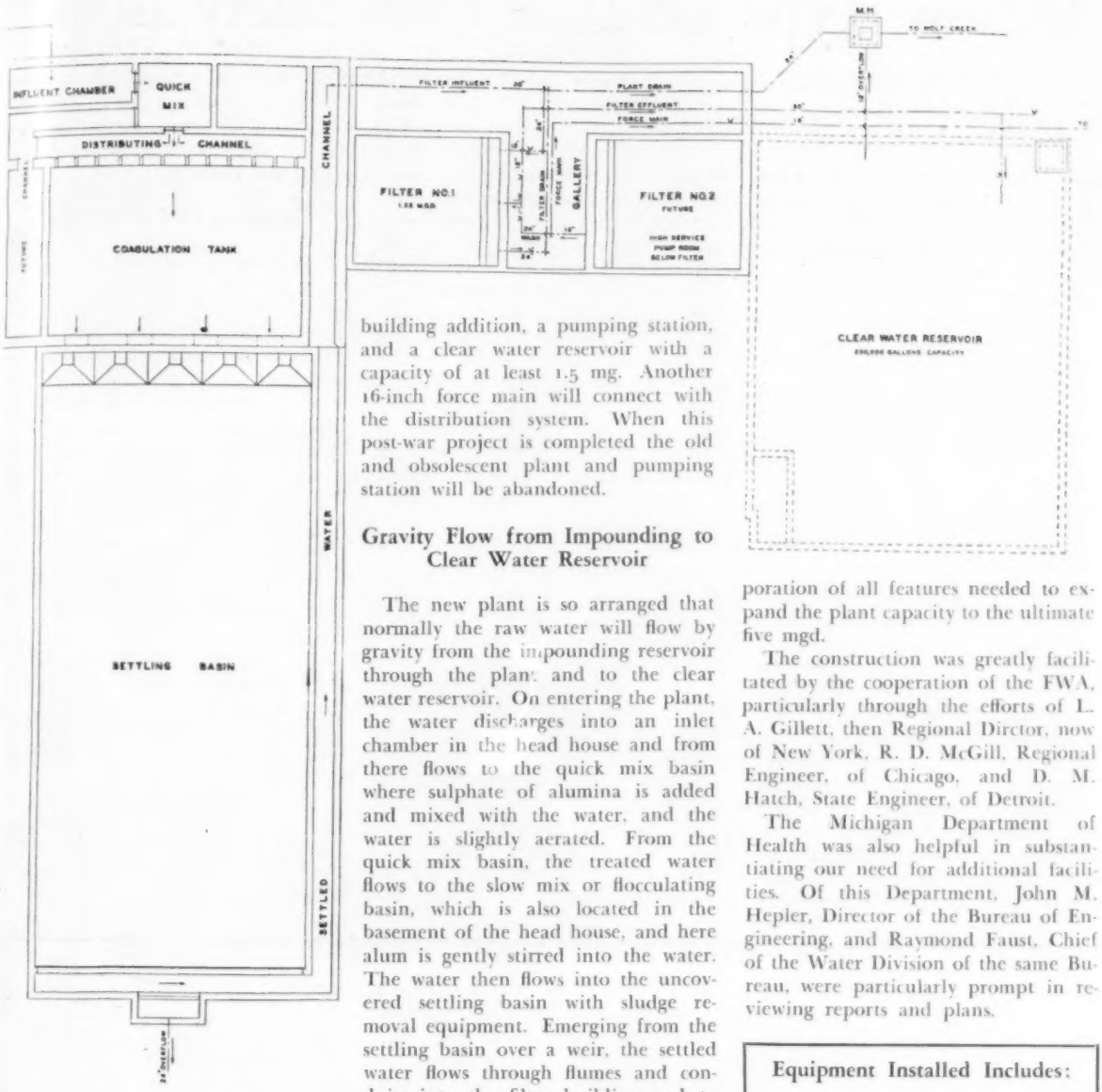
In the early part of 1943, the water consumption of the city began to increase at such a rate that the Adrian City Water Board engaged the services of Finbeiner, Pettis & Strout, Consulting Engineers of Toledo, Ohio, to prepare general designs and detailed plans and specifications for a new water treatment plant to be located at the foot of the new dam across Wolf Creek. In May the engineers submitted a report recommending a water treatment plant of five-mgd capacity which would include water softening in its processes.

By this time, however, the water consumption in Adrian had increased to such an extent that it was impossible for the city to meet the water demand with the existing filtration plant. During this emergency, a single well which had been developed in 1929 after numerous test wells drilled over the entire area of the city served to augment the supply from Wolf Creek. This emergency supply was not satisfactory because the water was hard and contained large quantities of iron.

Because this increase in the water demand was due to war production, the Adrian City Water Board immediately applied to the Federal Works Agency for assistance in the construction of the necessary facilities to supply the needed water. The consulting engineers submitted a complete report describing existing conditions and recommending immediate construction of a new plant. Plans were decided upon and application was made to the FWA on July 24, 1943, for immediate construction of a water treatment plant with a capacity of 2.5 mgd to be located at the foot of the Bent Oak Dam. The costs were estimated at $300,000 and the project was virtually one-half of the complete five mgd proposed for post-war construction. On September 10, the city was notified by FWA that the project had been approved, and the agreement was signed on September 27, 1943.

The War Production Board believed that the capacity of the proposed project could be reduced from 2.5 mgd to 1.25 mgd and several conferences ensued. However, in January 1944 a complete agreement was reached both with WPB and FWA and the engineers were directed to return and start at once on the work of completing the plans and specifications. On February 4 the WPB granted the necessary priorities for the project and on February 26 bids were received and the contract let to the Western Concrete Pile Corp., to drive the steel encased concrete piling. This part of

The front of the Adrian water works plant after construction was finished and grading operations completed.



the project was completed in five weeks. On May 12 bids were received on the balance of the construction and the contract was awarded to the Bass Engineering & Construction Co., of Birmingham, Mich.

The plant, which is now completed, consists of a 30-inch raw water main; a head house 59 by 47 by 46 feet high; a settling basin, 51 feet wide and 106 feet long; a filter building 35 by 66 by 36 feet high; and a 250,000-gallon clear water reservoir. In addition, a 16-inch force main approximately 3,800 feet long was built to connect the new plant with the distribution system.

The plant is built of reinforced concrete and brick. The portion just completed will operate in conjunction with the old filter plant and will be enlarged by the post-war construction of a head house addition, a filter building addition, a pumping station, and a clear water reservoir with a capacity of at least 1.5 mg. Another 16-inch force main will connect with the distribution system. When this post-war project is completed the old and obsolescent plant and pumping station will be abandoned.

Gravity Flow from Impounding to Clear Water Reservoir

The new plant is so arranged that normally the raw water will flow by gravity from the impounding reservoir through the plant and to the clear water reservoir. On entering the plant, the water discharges into an inlet chamber in the head house and from there flows to the quick mix basin where sulphate of alumina is added and mixed with the water, and the water is slightly aerated. From the quick mix basin, the treated water flows to the slow mix or flocculating basin, which is also located in the basement of the head house, and here alum is gently stirred into the water. The water then flows into the uncovered settling basin with sludge removal equipment. Emerging from the settling basin over a weir, the settled water flows through flumes and conduits into the filter building and to the rapid sand filter unit of 1.25-mgd rated capacity. From the filter, the water flows to the clear water reservoir from which it is removed by the one mgd and two mgd, high service motor-driven pumps.

The raw water from Wolf Creek is sometimes highly colored, but this color can be removed by excess treatment with alum. Excellent quality filtered water is being delivered and filter runs between washings have averaged about 72 hours.

Interesting features of the design are the gravity flow of the water from the impounded raw water supply through the plant with the consequent elimination of low service pumping; the compactness of design, with the quick mix and slow mix basins in the basement of the head house, which makes operation easy, and the incorporation of all features needed to expand the plant capacity to the ultimate five mgd.

The construction was greatly facilitated by the cooperation of the FWA, particularly through the efforts of L. A. Gillett, then Regional Dirctor, now of New York, R. D. McGill, Regional Engineer, of Chicago, and D. M. Hatch, State Engineer, of Detroit.

The Michigan Department of Health was also helpful in substantiating our need for additional facilities. Of this Department, John M. Hepler, Director of the Bureau of Engineering, and Raymond Faust, Chief of the Water Division of the same Bureau, were particularly prompt in reviewing reports and plans.

Equipment Installed Includes:

Cast iron pipe and fittings—U. S. Pipe & Foundry Co.
Raw water flow meter—R. W. Sparling
Quick Mix Mechanism—The American Well Works
Chemical Feeder — Builders-Providence, Inc.
Slow mix mechanism — The Dorr Company
Sludge removal mechanism — The American Well Works
Filter operating table—The Norwood Engineering Co.
Rate-of-flow and loss-of-head gauges —Builders-Providence, Inc.
Rate-of-flow controller — Builders-Providence, Inc.
High service pumps — De Laval Steam Turbine Co.
Laboratory equipment—Arthur S. LaPine & Co.
Chlorinator — Wallace & Tiernan Co., Inc.
High service flow meter—Builders-Providence, Inc.
Valves—Iowa Valve Co.

A New Type Of Pedestrian Safety Island

By S. HERBERT TAYLOR
County Engineer
Camden, N. J.

THE CITIZENS of Gloucester, New Jersey, began to consider the crossing of Broadway an extremely hazardous undertaking—even the boldest contemplated it with caution. Children were instructed to avoid it—and where they could not, as in going to school or the store or movies—to look sharply in all directions and to wait, no matter how long, for a break in the seemingly endless traffic stream.

And Why Not? This street, named in the horse and buggy era, was entirely inadequate to carry its burden of farm, industrial, and commercial vehicles. It was never free of the rumble of heavy vehicles, day or night, for it is the throat of the north-south movement, between the heart of the South Jersey farm and factory area and the twin industrial cities of Philadelphia and Camden.

One would read the name "du Pont" and wonder if the rubber-tired box car was enclosing T.N.T., nitroglycerine, or just ordinary chemicals. Or in the tomato season, one would view the constant stream of flat or open bodies, towering mountain-like with baskets of the deep red fruit, headed for market or the canning factory, or stand and wonder at the frequency and size of the buses, reading in front Vineland, Salem, Bridgeton, Paulsboro, or if headed in the opposite direction, Philadelphia. Scuttling between them one could see the smaller craft—the short-haul buses and trucks or ordinary passenger vehicles, freighted with the human cargo needed to service the industries of Philadelphia-Camden, or with the produce to serve and keep alive that cargo.

There was another reason for the restraining hand of caution—the fear in mothers' hearts. Seven persons had lost their lives crossing Broadway in one short year. There was scarcely a resident of Gloucester but knew a friend or neighbor he would never see or greet again.

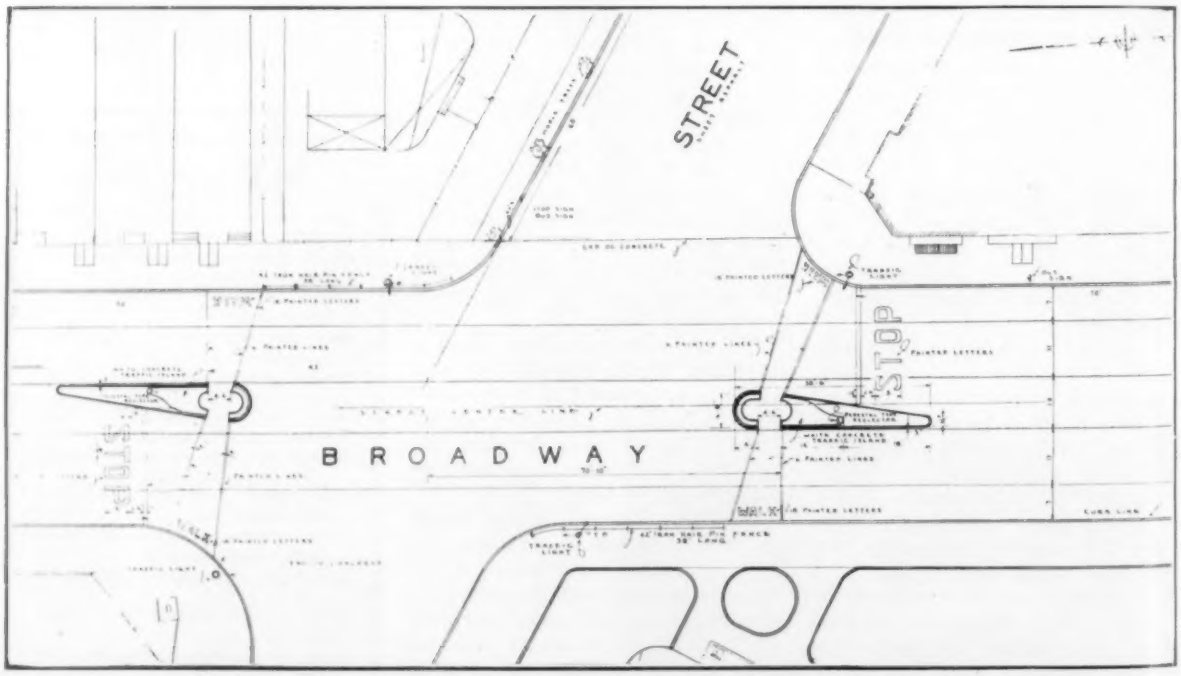
Bent beneath its load, this living, breathing artery exacted a terrific toll for the failure of its users to rebuild and modernize. Congestion prevented both walkers and drivers from seeing properly and caused them to take chances. In wet weather the steep crown made vehicles slip sideways, causing drivers to avoid the heavier pitched sides, further reducing usable width of street, and increasing congestion.

But the death rate dropped. Fear had taught the people caution; and more adequate lighting, installed through coperation of state, city, and county authorities, enabled them to see the hazards better. However, the highway still maintained its record as the worst in the county, a menace to the unwise and unwary.

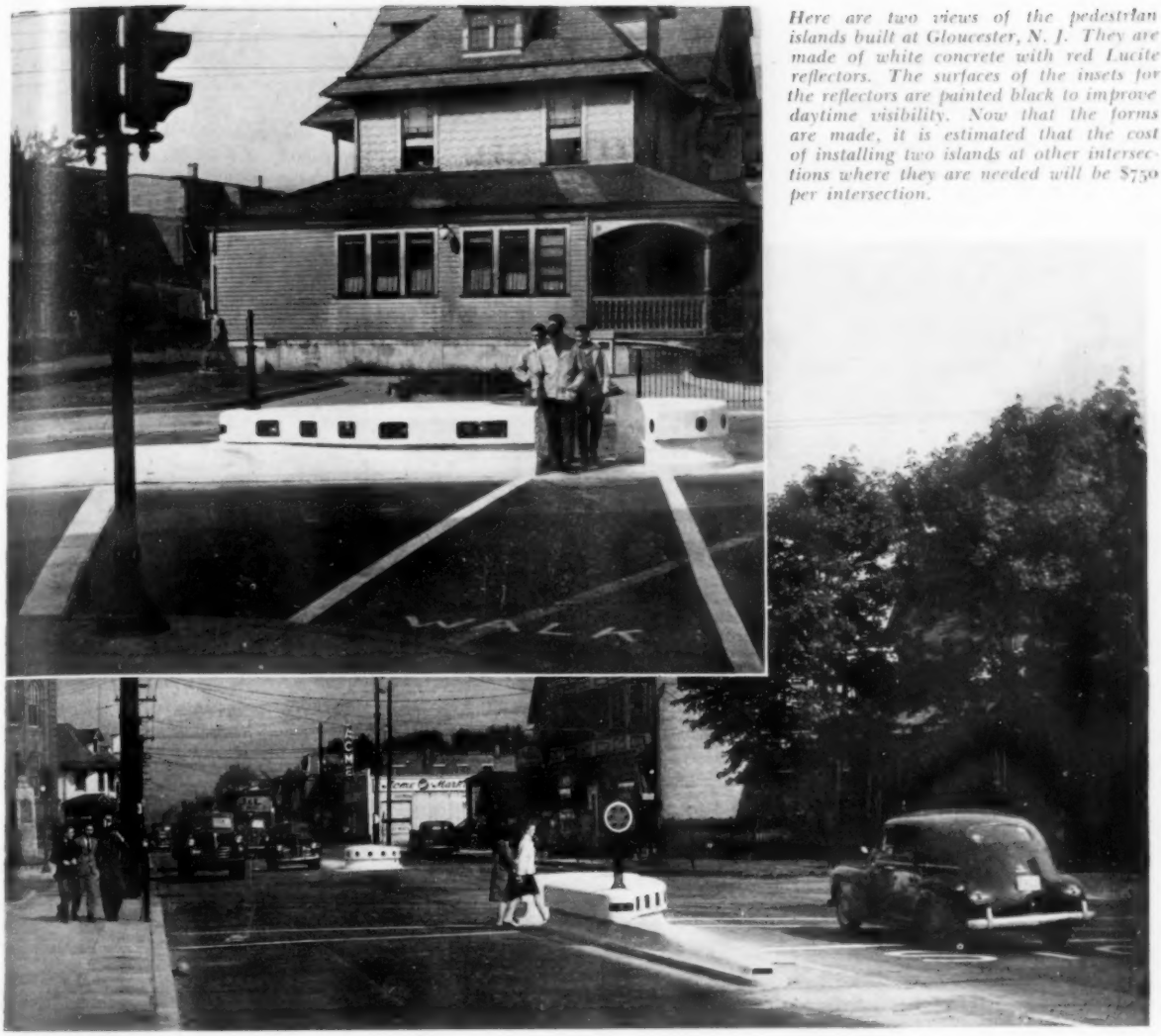
Something Had to Be Done

The city of Gloucester is adjacent to and just south of Camden. Some of the huge shipyards of the New York Shipbuilding Corporation extend to within its limits. The highway serves such other plants, vital to wartime activity, as Armstrong Cork Company, Camden Marine Terminal, Camden Copper Works, Campbell Soup Company, Radio Corporation of America, and Atlantic Refining Company. The tremendous increase in traffic in 1941, due to the war preparation activity of these and other plants, made it absolutely necessary to do something about Broadway. Traffic counts showed 16,500 vehicles per day, a large proportion of them trucks and buses. The two County Freeholders from the city demanded action.

Fortunately, the County Engineer's office was well acquainted with the facts about this highway. When it came to a proposed design, it was realized that more had to be done than just repave and widen. To increase speed and capacity without proper recognition of the pedestrian problem



This plan shows the general shape and size of pedestrian islands designed for Gloucester, N. J., and how they were placed at a dangerous intersection.



Here are two views of the pedestrian islands built at Gloucester, N. J. They are made of white concrete with red Lucite reflectors. The surfaces of the insets for the reflectors are painted black to improve daytime visibility. Now that the forms are made, it is estimated that the cost of installing two islands at other intersections where they are needed will be $750 per intersection.

would have been to invite a heavier accident toll.

Maximum capacity, twice the existing, on the 66-foot-right-of-way was attained by a three-lane design with paved shoulders of adequate width to handle parked cars. The center traffic lane was made ten feet wide, the two side ones eleven feet. Parking lanes were seven feet wide, making a total paved width of 46 feet. The paving material was to be concrete.

Control of speeds was considered absolutely essential to pedestrian safety. Therefore installation of a progressively timed signal system was proposed as part of the original design. Only by this method can speeds be positively controlled.

Safety for Pedestrians with Minimum Hazard to Moving Traffic

Even so, the pedestrian would be exposed to three moving traffic lanes in his journey across this thoroughfare. Remembering the traffic engineering adage, "that it is never safe to cross more than two lanes at one time," an island was considered for installation in the middle traffic lane. How to design this, so that it would positively protect the pedestrian without constituting too great a hazard to moving traffic, was the problem. It was also felt that the design should be such as to offer the pedestrian the maximum of convenience; no steps up or down, for instance—women with baby carriages seek to avoid such obstructions. The author well remembered a challenge, issued by a leading traffic engineer, to design such an island.

With these factors in mind, the design formulated itself into a barricade around the pedestrian standing in the center of the street—a barricade of sufficient height to positively exclude automobiles from entrance into the pedestrian area. The island was simply opened for the pedestrian: he walks through the barricade without any steps up or down.

The next problem was how to protect the approaching driver so that he might not be too suddenly trapped into collision with the barricade. This was accomplished with a long tapering section, varying from a low mound at the end to the full barricade section around the pedestrian area. In between the low mound and the barricade section, the island was sloped in the direction of approaching cars so that a driver, who unwittingly struck it, would be helped in guiding his vehicle back to the highway without damage. The barricade section was shaped so that if struck, the blow would be glancing, and the vehicle would be pushed in the right direction.

Safety for the Vehicle

The danger of straddling was minimized by locating the mound end of the center traffic lane so that it would be to the left of approaching cars. If a car should straddle, however, the height of the island gradually increased so that wheels would be lifted from the road surface and the car

would lose speed and traction before it came against the barricade.

State, County, and City Cooperate

This section of highway happened to be in the state highway system. The then Commissioner of Highways did not believe, however, that it properly belonged there and agreed to its improvement only with the understanding that the county would take jurisdiction after construction. An agreement, including the roadway surface and traffic signals, was negotiated between state, county, and city. The pedestrian islands were omitted because the State Highway Department did not consider them a proper part of State construction.

Wartime difficulties intervened, but when the facts were demonstrated to the Facility Review Committee of the War Production Board, construction was allowed to proceed. The repaving operation was completed by September 1943, and the progressively timed signal system a few months later. Wartime restrictions forced the use of plain concrete, ten inches thick, with the usual dummy joints which are a part of the non-reinforced design.

The county took over the new Broadway in the latter part of 1943, and in the summer of 1944, constructed two of the pedestrian islands above described. The location selected, one of the busiest cross streets in the city, posed some additional problems. The intersection was not the usual, simple right-angle one. The streets crossed at quite a severe angle, making it necessary to set the islands further back than usual to allow for left turning of trucks and buses. This necessitated fences on two corners to guide pedestrians to a safe place to cross. The plan shown on page 74 will indicate how the problem was solved and will also show the general shape and size of the islands. The accompanying photographs show how the islands appear in elevation and how they are used by the pedestrian.

In order to improve visibility, the islands were built of white concrete, using Atlas white cement; and red Lucite reflectors, manufactured by Signal Service Corporation, Elizabeth, N. J., were inset into the barricade surface and the mound at the end of the island. The surfaces of the insets were painted black to improve daytime visibility. This is seen in the black circles in the photographs. An additional cluster of Lucite reflectors was mounted on a cast iron pedestal to provide visibility over the tops of cars ahead of the driver.

Construction also posed some serious problems because of the varying section and sloping surfaces of the islands. The county's bridge engineer, Furman W. Shaw, made templates of the various sections first in cardboard, where adjustments were made to assure smooth lines and proper sloping surfaces. The sections were then cut out of plywood and the forms built much as a boat is built. Here the skill and ingenuity of our bridge foreman, William J. Miller, contributed much.

Forms were bolted together and made into demountable sections so that they could be re-used in other locations. Form costs were approximately $600 and construction costs, excluding the iron fences, another $750. This was for two islands, or one intersection. Since the same forms will serve additional installations, the cost will be only $750 per intersection.

No Pedestrian Accidents

Since their completion in October 1944, there have been no serious collisions with the islands and no pedestrian accidents crossing Broadway. Pedestrians soon learned to appreciate their existence and to use them properly. The school children were among the first to catch the idea.

The islands have been well received by the public and will be installed at two other Broadway intersections this summer. Additional locations will be added each year.

Considering that the common width of a city street in the East is 66 feet and that such highways will have to be maintained, regardless of what parallel or relief routes are provided, the author feels that Broadway, as constructed, constitutes close to the ultimate in design. The pedestrian islands complete the picture. The three traffic lanes, freed by an adequate provision of parking lanes, double capacity. The progressively timed traffic signals positively control speeds. The islands offer additional protection to pedestrians.

A Possible Improvement

A weakness in the design is perhaps in the width of the parking lane. It is a little scant, and in the writer's opinion, should be widened from seven to seven and a half feet. This would make the over-all width of the roadway 47 feet, leaving nine feet for sidewalk on each side. This should prove ample in most locations.

The speed limitation of the signal system does not reduce traffic capacity. The short 40-second cycle definitely helps it. When the main shift breaks at New York Shipbuilding Corporation, the traffic flows in a steady and orderly fashion, without congestion, through the town.

While we have only scattered comments of individual citizens to work on, we like to feel that the citizens of Gloucester now regard their highway as less of an ogre, that they cross it with less trepidation, and that the fear in mothers' hearts is reduced. At least there has not been created a new speedway, which, without proper controls, might have developed into a greater death trap than the old highway ever was.

Post-War Housing—Whose Job Is It?

A SYMPOSIUM in the June issue of *Tomorrow's Town*, monthly bulletin of the National Committee on Housing, presents a consensus of beliefs by builders, real estate men, and mortgage bankers in various parts of the United States on what is going to happen during the first two years of post-war home building. These men think (a) that the majority of new homes will rise on undeveloped acreage, (b) that the trend is toward development of complete residential neighborhoods, (c) that there will be no marked change in architectural design, (d) that more than three-fourths of the dwellings will be priced from $5,000 up.

A survey by Seward H. Mott, director of the Urban Land Institute, showed that the estimated price range and percentage of homes which are expected to be built in the first two post-war years are as follows:

Low cost—$3,000 to $6,000	23%
Medium cost—$5,000 to $10,000	67%
High cost—$8,500 and up	10%

From these findings two conclusions seem inevitable:

1. That New York and other cities must invoke adequate controls of real estate subdividing—as to site planning, density, installation of utilities, and provision of community facilities—to prevent repetition of the mistakes of the housing boom of the 1920's.

2. Since by far the greatest need is for decent housing in the low-cost range, and private builders estimate that 77 percent of their output will be in the medium and high cost ranges, adequately financed programs of public housing and of public aid for slum clearance and urban redevelopment are essential until private industry is able to take over the entire job.

Snow Removal Practice in Union Township

By GEORGE KLING
Superintendent
Dept. of Streets and Highways
Union, N. J.

WE HAVE worked out a system of snow removal in Union Township which is efficient and, compared to previous methods used here, economical. Here is how it works:

The town is divided into seven sections. Each section is served by one of the department's seven plows. Before November employees of the Road Department are assigned to a truck and plow. Each is given a specific section of the town over which he is responsible for snow removal and another section where he will assist another employee after his own streets have been opened up.

Each employee is also assigned certain streets leading into the main county and state roads on which he is responsible for the cindering of the intersections at the point of juncture whenever they are icy.

When snow has reached a depth of two inches and is continuing to fall, all employees of the Road Department are called out. Each truck plows the section to which it is assigned, double lane, that is, up and back. As soon as its section is opened it goes to the other section where it is to assist and helps open the roads in that section. After this is done it goes back to its own section and plows the full width of the road, then, if need be, helps the other section finish plowing.

Not until all streets have been plowed the full width is any employee finished for the day or night. The usual time required runs from 12 to 24 hours, depending on the amount of snow that has fallen.

The White Loader mounted on a Case Tractor jumps the curb to clean up snow around parking meters in Union.

In Business Section

The following day after the plowing has been completed, all Road Department employees completely move and haul away the snow from the business section. The night before we intend to remove snow from the business section we spread from two to three tons of calcium chloride on the streets to prevent the snow and ice from bonding. The calcium chloride works its way down through the snow and ice to the surface of the road and keeps the snow and ice from freezing to the road surface.

We keep a stock of 300 to 400 cubic yards of cinders on hand in our yard at all times for slippery intersections. We mix calcium chloride with the cinders to keep them from freezing fast in the pile and also to improve the anti-skid effectiveness of the cinders when placed on either snow or ice. We find one cubic yard of treated cinders is more effective than three cubic yards untreated. When needed for use, the cinders are loaded on the trucks from the stock pile in about three minutes with either our White loader or our Barber-Greene loader. We now have on order a Nelson loader which will further facilitate our snow handling work.

We use treated cinders on all dangerous hills, intersections, or any other place where the surface is icy.

Here the White Loader is emptying snow into an International Harvester truck

Municipal Cooperation in Selection of Federal-Aid Secondary Road System

COOPERATION of municipal road officials will be needed by state highway departments in the preparation of plans for submission to federal authorities for consideration in the selection of a system of principal secondary and feeder roads, usually referred to as the "federal aid secondary system," according to instructions issued by the Public Roads Administration of the FWA to its field offices. Funds authorized for secondary and feeder roads by the Federal-Aid Highway Act of 1944 will be spent on a system of such roads selected by the state highway departments in cooperation with county supervisors, county commissioners, or other appropriate road officials. The term "other appropriate local road officials" is construed to include the appropriate officials of municipalities in which federal funds may be expended on routes of the system to be selected. The requirement for cooperation with local road officials is considered a basic requirement of the act applicable in every state to the initial selection of the system and to all extensions and modifications thereafter, and is not modified or waived by any other provision of the act. In a county or other political subdivision of a state in which all public roads and highways are under the control and supervision of the state highway department, that department may be considered the local road authority and cooperation with other local authorities of such subdivision is not then required.

The manner and method of cooperation with local road officials shall be determined and exercised by each state highway department.

Practical Advances to Come in Police Radio

Police departments throughout the country are waiting for the innovations promised by the reallocations of frequencies and the new equipment for exploiting these many additional channels. A recent demonstration at Schenectady revealed some of the improvements just around the corner.

By CAPT. W. K. ALLEN
Nassau County Police Department
Mineola, N. Y.

RECENTLY I was one of a group of members of the Associated Police Communication Officers at a demonstration of high frequency FM and Radiotype. Fifty of us gathered at the site of some of General Electric's transmitters on Helderberg Mountain. Here both the 30-40 and 161.775-megacycle FM equipment was in operation, as was also Radiotype, which most of us had never before seen.

These days the average person is familiar with the wire teletype but to see a radio-operated machine clicking away at 100 words per minute was really amazing. Both radio telegraph and radiotelephone speed up the chase for criminals and are universally accepted, but in numerous cases Radiotype will overshadow them because of the value and authority of the printed word. There can be no dispute when the message is received exactly as it was placed on the machine at the transmitting point. It is important that the equipment can be connected directly into the FM radio now in operation without complicated wiring or expensive readjustment of the system. Not only should Radiotype fit into police work but also into the other emergency services, such as the fire department and public utilities.

We were told that it is entirely practical to multiplex voice and radio on the same carrier without interference on either channel. Though news to us, the fact that the armed services have used the method all over the world indicates progress far beyond the experimental stage.

Voice, Type, and Pictures Sent on Same Wave

A standard IBM electromatic typewriter is connected to communication apparatus. The message is typed on a sending typewriter which perforates a tape. The tape then goes through a head which in turn keys an electronic device causing a tone signal to be emitted. This tone is applied to a radio transmitting unit and at remote points is picked up by a receiver or receivers connected to the receiving typewriter which prints the message. While we are thinking of it as an aid to the emergency services alone, the system is expected to find a large field in the business world. Plans are already being made for a relay system which will not only provide numerous Radiotype channels but also television, sound, radio photo and facsimile all on the same carrier wave.

Police Assignments on New Frequency Allocations

While the Radiotype temporarily overshadowed conventional radio at this demonstration, let us not forget the 161.775 megacycle FM equipment which performed so well. This is of great immediate interest. Under the new F.C.C. frequency allocations system approximately 36 channels will be provided in the 152-162 megacycle region. Since at these frequencies transmission is more or less "line of sight," it is hoped that in areas where there are many police departments assignments will be so spaced that these areas will be essentially free from interference. In the metropolitan New York area it is claimed that there are now 500 potential radio systems within a radius of forty miles. As many as fifteen of these systems are now operating on the same frequency, each one being heard by those who are sharing that frequency. They all get along by being extremely cooperative in keeping off the air as much as possible.

This situation exists also around Boston, Detroit, and other sections of the country adjoining large cities. If some of these stations were to move to the higher frequencies, interference would be reduced in the 30-40 megacycle band. At present very little if any equipment is available to make changes, but in the post-war era departments can look forward to very satisfactory communication with a minimum of interference. At the demonstration made by General Electric a four-watt FM transmitter in a car operating in 161.775 megacycles successfully communicated with a receiving station at the Helderberg site, fifty miles away. Also at Helderberg was a 35.46 megacycle transmitter and in the car a 35.46 megacycle receiver.

A survey indicates that as many as 78 percent of the stations in some areas will change over to very high frequency, the majority within a period of five years.

The radio typewriter being demonstrated by General Electric and International Business Machines Corporation's engineers at the visit of the New York State chapter of the Associated Police Communications Officers to Schenectady, April 20. The girl is sending a message which is being received by radio typewriter in foreground. Radiotype is one of the services expected to be carried by the radio relay system to be built jointly by International Business Machines Corporation and General Electric Company. The initial I.B.M. experimental circuit will connect Schenectady and New York City and is expected eventually to serve many cities.

It Almost Runs Itself

The Washington, D. C., sewage treatment plant. In the foreground are the covered grit chambers, beyond them are the Dorr settling tanks and in the background are the digestion tanks, the power plant, and administration building.

Washington's sewage treatment plant has low operating costs, low personnel requirement, and capacity to handle consistently high overloads

YOU CAN'T miss the guards in Washington, D. C. The streets seem full of policemen, MP's SP's—all kinds of guards. Few indeed are the official buildings in this powerful capital city without guards.

But Washington has another guard that might not be noticed—one that unostentatiously protects the city's health, quietly going about its business in wartime as in peacetime, patiently shouldering a monumental war load and doing it well.

That guard is the District's sewage treatment plant.

Washington, to describe it prosaically, is crowded. The story of how it filled up solidly with civilian and military workers until it spilled out like a flooded lake into Virginia and Maryland., has been told too often to bear repeating here; so has the story of the mushroom growth of buildings to accommodate these workers and the various wartime agencies in which they work.

The Unforeseen Overload

But what of the sewage treatment plant that serves this important area—how did it stretch its capacity, maintain treatment even with limited operating personnel, and even heat a rather sizable housing project located nearby when coal was short?

Metcalf and Eddy, with Harrison P. Eddy, Samuel A. Greeley, and the late John H. Gregory as consultants, designed the plant in 1933-34 on a carefully calculated basis of a community of 650,000. They could not know that in less than ten years this country would be involved in a great war and Washington's population would pass the million mark.

The Plant Met the Test

However, the plant that they designed and built for the district, completing it in 1938, seems able to take care of this overload far more easily than the balance of Washington has been able to accommodate the wartime influx. As far as the quantity of sewage is concerned, this has averaged 130 mgd on an annual basis and has hit averages as high as 162 mgd. Since the maximum capacity of the pumps is 240 mgd, peak hourly loads entering the plant will very often reach this figure. The five-day BOD count of the sewage indicates a population of better than 1,000,000—very close to the actual population of Washington, as nearly as it can be estimated.

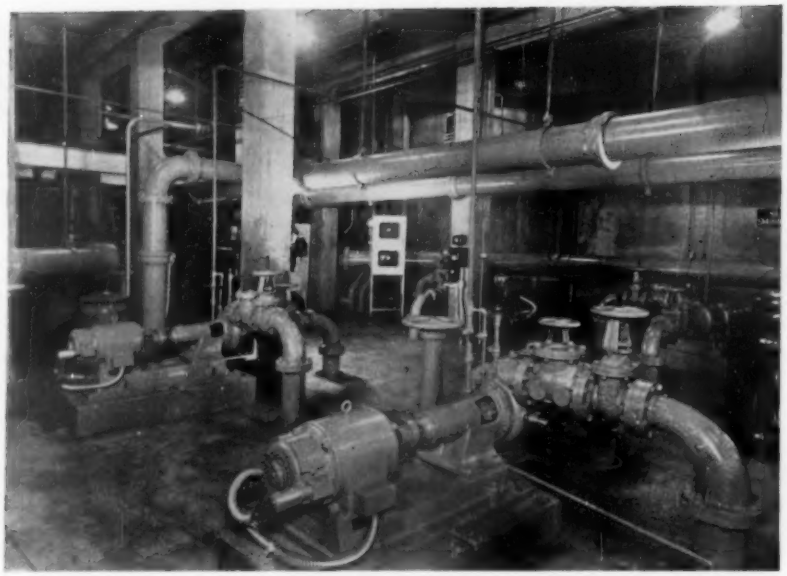
Many automatic features were included in the design of the plant, and this has paid dividends during these days when the 71 positions in the plant have had to be filled by an average of only 54 men and three women.

The sewage enters the plant through a suction wet well and is lifted twenty feet by a set of four Worthington pumps having capacities of 40, 60, 60, and 80 mgd. Solenoid-operated Chapman pivot valves automatically control the flow through the pumps and are interlocked with the operation of the synchronous electric motors. These motors have a capacity of 200, 300, 300, and 400 horsepower. This control feature makes it possible for one man to supervise all pumping operations, though it is imperative that he pay strict attention to the maintenance of the valves and motors.

Grit Collection

The sewage then goes through a set of eight grit chambers with Chain Belt scrapers and screw conveyors. The operator can control the velocity of the sewage to approximately one foot per second by varying the number of chambers he puts into service. The sewage has been averaging about 1.1 cubic feet of grit per million gallons. Grit can be hauled away either by truck or in railroad gondolas, but, in practice, most of it has been hauled by truck to low ground near the plant.

The sewage then flows through a large venturi meter with a 9-foot



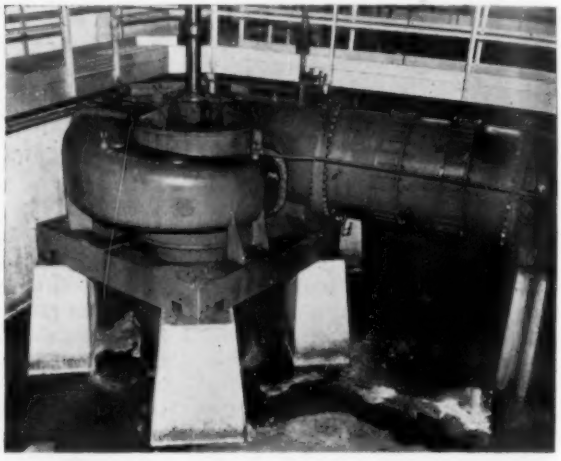
This is the digester control room. Note the centrifugal type Chain Belt sludge pumps used to handle the digested sludge. Displacement-type pumps are used on the raw sludge lines. The walls of the digesters may be seen in the background.

diameter inlet and a 4-foot, 6-inch throat diameter into preaeration tanks and then to the sedimentation basins. For preaeration the plant uses three tanks and applies air at the rate of approximately .01 cubic feet per gallon of sewage and detains the sewage for four minutes at the design rate of 130 mgd. This treatment also is designed to remove part of the grease.

Sludge Collection

Sedimentation is accomplished in twelve tanks, each 106 feet in diameter designed to furnish two hours detention at the rate of 130 mgd. The tanks are equipped with Dorr Sifeed collectors. These tanks, of course, furnish the most important part of the treatment by reducing the five-day BOD content of the sewage by about 33 percent and the suspended solids content by close to 50 percent. Effluent discharged from the tanks receives no further treatment.

The sludge and scum, however, are digested in eight tanks with fixed concrete covers. These tanks each measure 84 feet in diameter and provide a digestion capacity of about 1.75 cubic feet per capita based on the design population of 650,000. Hot water heating coils hung on the inside walls of the tanks maintain a digestion temperature of about 95° F. These coils, consisting of 2½-inch wrought iron pipe, furnish 2,325 square feet of heating coil surface per tank. Chain Belt Co.'s Rex direct action pumps move the the sludge to the digestion tanks.



RIGHT: *A close-up of one of the Worthington centrifugal pumps.*

Digestion Overload

These digestion tanks have actually borne the brunt of the overload caused by Washington's growth. As the population approached the million mark the ratio of digester capacity to population dropped to around 1.16 cubic feet per capita, so that extremely careful operation is necessary.

Superintendent Ralph Fuhrman reports that difficulty was experienced first in the increased depth of scum on the tank. He has reduced this trouble somewhat by removing part of the scum directly from the digesters. The digested sludge, however, before being dewatered, goes through the elutriation process in order to help condition it for the vacuum filters. This particular installation is one of the first to use the elutriation process and was originally set up to use any method of elutriating the sludge that the operator saw fit. During the first three months single-stage washing was used. After that, however, the valves were shifted and thereafter the more economical two-stage, counter-current method of treatment was used. This consists essentially of operating the unit in two separate sections, introducing fresh wash water into the final stage tanks, and the effluent from these tanks into the primary stage inlet.

Mixing Tanks Eliminated

Significant also has been the fact that it has been possible to eliminate the use of the air-agitated mixing tank and yet obtain equal effectiveness. Sufficient mixing of sludge and wash water can be obtained directly in the pipe lines, thus indicating that special mixing is not required.

Mr. Fuhrman speaks enthusiastically of his experience with elutriation. It is his estimate that, after all expenses have been figured, the treatment lowers operating costs by more than $11,000 per year as well as making operation easier.

Sludge Dewatering

To dewater the sludge, the plant uses four Conkey vacuum filters each with 500 square feet of dewatering area. These filters, because of the enormous amount of sludge produced, have had to be operated almost continuously holding rigidly to a five-day week schedule. The sludge is treated with a ferric chloride dosage of around 3.5 percent. Only 12 filter cloth replacements are required for all four filters annually.

The digested, dewatered sludge, with a moisture content of about 70 per-

cent, is shipped to the District Penal Institution for use as a soil conditioner on the Institution farms.

Sludge Gas Utilized for Power

Of particular interest is the use of the sludge gas for power, because this plant, for a number of years, had what was believed to be the largest sludge-gas powered engine in the world. This engine is a 1,200 hp Rathbun-Jones unit with six cylinders, each measuring 22 by 26 inches, the engine being directly connected to an 800 kw generator. The engine jacket water is circulated directly to the sludge digestion tanks without the intermediate step of heat exchanges customarily found in more recent installations. Exhaust gases are passed, if desired, through a waste heat boiler for low pressure steam generation.

The plant produces around 4,500,000 kwhrs of electricity, or approximately 80 percent of the total power used. This has been cut down in recent years by the fact that during the coldest months the operation of the engine has been curtailed to by-pass the sewage gas for use by the Bellevue Naval Housing project for space heating, to make the fuel supplies last longer. When the gas was used in this manner, the sewage treatment plant used purchased power, the cost of which is of course assumed by the Navy Department.

Mr. Fuhrman has definite hopes for post-war improvement of the plant. The sewage itself presents no particular problem. Probably in no other major city in the country will one find sewage that is so predominantly domestic in character. The lack of any major industrial plants in the city solves one of the main headaches that occur in most plants of this size. However, he feels that the post-war period should see Washington taking on the added obligation of giving the sewage some further treatment. If the sewage flow remains at its present high level, he feels also that additions will be required to the sedimentation tanks and digesters.

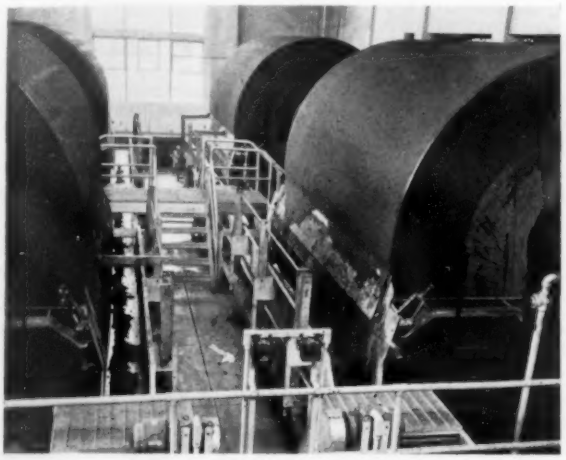
As indicated previously, the operating costs of the plant are very low. The 1944 fiscal year illustrates this. During that period the plant pumped and treated 47,390 million gallons of sewage at a cost of $181,469, which amounts to an over-all cost of operation for the year of $3.83 per million gallons. Of this, pumping costs represented $0.93 per million gallons.

Washington's sewerage system of which this plant is a part is under the general direction of Col. C. W. Kutz, Engineer Commissioner, and Harold A. Kemp, Director of Sanitary Engineering for the District of Columbia. Paul D. McNamee is Chief Chemist at the plant.

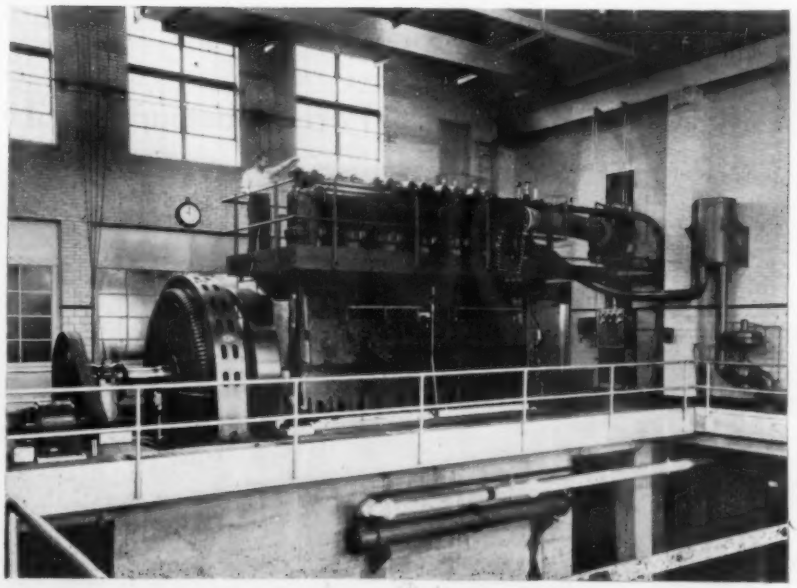
OPERATING COSTS OF THE SEWAGE TREATMENT PLANT
WASHINGTON, D. C.

Fiscal year 1944

	Personal Services	*Materials & Supplies*	*Electrical Energy*	*Shipping Costs*	*Miscellaneous*	*Total*
Administration	$12,021	$205			$380	$12,606
Laboratory	8,917	567			380	9,864
Sewage pumping	14,333	261	$28,702		913	44,209
Grit removal	11,559	106	271		760	12,696
Grit disposal	383					383
Grease separation			2,036		760	2,796
Sedimentation	9,539	1,816	441		760	12,556
Sludge digestion	5,630	1,202	170		760	7,762
Sludge elutriation	2,312	173	136		760	3,381
Sludge dewatering	12,829	15,241	1,866		760	30,696
Sludge cake disposal	151	773		$25,733		26,657
Shops	6,471	926			760	8,157
Roads, walks, grounds	7,772	872	305		756	9,706
	$91,918	$22,142	$33,927	$25,733	$7,749	$181,469



LEFT: *A battery of four Conkey vacuum filters, each with 500 square feet of area, dewater the sludge after digestion and elutriation.*



This 1,200 hp Rathbun-Jones gas engine was for many years the largest engine powered by sludge gas in the world.

"Battle of Noise" Routs Starlings

To the Editor of THE AMERICAN CITY:

THE OFFSPRING of the sixty starlings that were brought over from England in 1890 and released in New York City's Central Park recently became such a nuisance to the citizens of Shreveport, La., that numerous and vigorous complaints were made to the Police Jury by persons who had to stand under the trees of the Court House Square for a few minutes in the evening while waiting for their homegoing trolley. Strangers who parked their automobiles at the curb under the trees sometimes returned to find that the hood and top of the car had the appearance of having been camouflaged to resemble a Plymouth Rock hen or a coach dog.

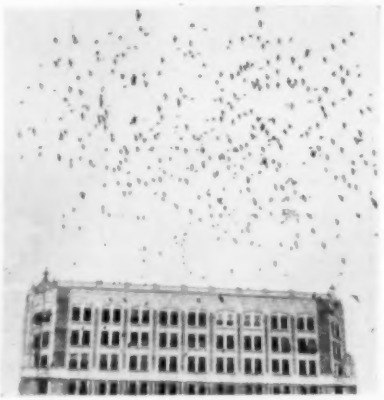
The writer was walking bareheaded down the sidewalk a block away from the Court House when what he thought was a raindrop hit the top of his head. But alas, when he looked up he found that there wasn't a cloud in the sky—only birds.

Recently the Police Jury decided to declare war on these unwelcome inhabitants and rid the Square of them. J. L. Worsham, chairman of the house and grounds committee of the Police Jury and "general" of the battle, chose noise as the weapon—to be made with anything from a mouth organ (played off-key) to a plantation dinner-bell.

Several hundred birds were frightened away the first evening, but thousands remained. The local newspapers proclaimed it a "war" on the birds and wrote it up as "The Birds Win the First Battle."

The second evening of increased noise was too much for most of the starlings, so they retreated to apparently regroup forces. Only a few hundred of the braver birds stayed to battle it out.

Each evening fewer of the birds returned to attack, so after five nightly skirmishes "General" Worsham declared "the starlings are whipped and victory has been won." However, the noise attacks were continued for a few more nights to let the birds know we meant business.



Starlings leaving the Shreveport Court House.

Where did the starlings go? Reports have come from Barksdale Air Field, located on the highway seven or eight miles east of Shreveport, that several thousand of the birds had settled there and that "war" was being waged against them in numerous ways. An article in the Barksdale paper said "the birds radioed back that if Barksdale proposes to drop anything on them—just remember two can play at that game."

The citizens of Shreveport did not want to kill the birds, neither did they want to cut down the 28 live oak trees that adorn the Court House Square, hence the Battle of Noise.

DR. L. H. HAYDEN,
Shreveport, La.

EDITORIAL NOTE: Another method of attack on starlings is reported in an Associated Press report from Milwaukee, Wis., where the building superintendent of the courthouse, John Messmer, put axle grease on the cast iron grilles on the fourth and fifth floor windows where the birds were particularly fond of sitting. This is the way it works—a bird lands on the greasy perch, slips, strikes his head against the window and falls. After a few such painful and undignified experiences, the starlings go elsewhere.

Noise vs. Nuisance

WHEN does noise become a nuisance? In connection with a study of Albert Whitted Airport in St. Petersburg, Fla.—a close-in airpark in being—the United States National Bureau of Standards, at the suggestion of the National Aeronautic Association, recorded noise levels adjacent to the field in an attempt to assay the extent of annoyance to residents created by planes using the field. From the official report of Dr. Guy S. Cook, who made the study, come the following excerpts as quoted in the May 1945 issue of *National Aeronautics*, official publication of the Association:

"Conditions were, from the point of view of noise, as bad as are apt to be encountered. The observations of noise level were made near the curb on Second Street. At this location, planes pass within a few blocks at altitudes as low as 200 feet, and in returning, as high as 2,000 feet. The highest level observed here was 99 db when a plane passed over at about 200 feet . . . practically all were above 85 db. Noise levels of over 90 db in a residential district certainly constitute a nuisance if they come frequently. However, the noise from a plane flying at low altitude is of short duration, and the highest levels persist for only a few seconds.

"Trucks passing produced at this point levels of 83, 85, 88 and 90 db. A motorcycle . . . produced a noise level of 96 db. . . . A street car starting gave a noise level of 86 db.

"These examples are sufficient to show that planes are not the only source of objectionable noise. It must be noted, however, that these noise levels are measured near the curb, and vehicles passed within a few feet of the microphone. The noise from planes affects a much wider area than, for example, does the noise from a street car, since a plane is a much more powerful source of noise than a surface car."

Dr. Cook reports that it is impossible to state at what levels a noise becomes annoying. From his scientific gaging, he concludes that a noise which is scarcely audible above traffic noise in a busy street may be extremely annoying in a quiet residential district. "Persistent noise is much more annoying than noise heard only at intervals. Low flying planes may produce a noise which is very high in level, but persists at the high level for only a few seconds. In this case, the degree of annoyance depends principally upon the frequency of occurrence."

Birch Grove, in Memorial Forest, Shelburne, N. H.

PHOTO COURTESY CONTRACTORS AND ENGINEERS MONTHLY

After the war simple permanent memorials will mark both entrances to the forest.

Urban Redevelopment Legislation Analyzed

By SEWARD H. MOTT
Director, Urban Land Institute
Washington, D. C.

DURING the last five years, Urban Redevelopment Enabling Acts have been passed in seventeen states, and bills have either been introduced or are being considered in most of the others. These bills fall roughly into the three groups analyzed below:

Redevelopment Corporation Laws

Ten states have passed such legislation: Illinois, Indiana, Kansas, Kentucky, Michigan, Minnesota, Missouri, New Jersey, New York, and Wisconsin. These laws follow very much the same pattern, and provide for the assembling of land, clearing, and the redevelopment of slum or blighted area *in its entirety* by a private corporation.

These bills, and those discussed in the next section, are actually housing bills rather than redevelopment legislation. They both proposed to clean up slum areas largely through the erection of housing projects; the former using private capital, the latter using public money or credit.

In theory, the public housing projects are for those of the lowest income, while the redevelopment corporation projects are not necessarily for this group. However, due to tax abatement or other subsidies, the redevelopment corporations are expected to provide decent dwellings for lower rent than would be otherwise possible.

The chief difference in bills of the first group is that in Illinois, Kansas, Missouri, and Indiana, land is assembled by corporations which are given powers of eminent domain. Under the New York, Kentucky, Michigan, New Jersey, and Wisconsin bills, the municipality retains the powers of eminent domain and assembles the land for the corporations. Partial tax abatement and also limitation of the dividends are usual features of these acts.

The long-range benefit to the city of this legislation is to be seriously questioned. It is doubtful if well-balanced neighborhoods can be created under it. It is probable that the existing family density will be increased. Due to the emphasis being almost wholly on the construction of housing, public open space and community facilities may be largely neglected. Also opposition to tax exemption as a method of subsidy is increasing, as many feel that the amount of subsidy is hidden.

The proponents of this legislation state that it provides an excellent channel for the investment in housing of the huge sums in the coffers of the insurance companies and similar large financial institutions. In some sections of this country, particularly the South where capital is scarce, this is most important. This legislation has been fairly easy to pass and by many is considered an opening wedge for consideration of the whole problem.

Public Housing Authority as Redevelopment Agency

Legislation of this kind has been introduced in at least 21 states and is contemplated in others. Bills have been passed in Arkansas, Florida, Illinois, and Tennessee. They make the Public Housing Authority the redevelopment agency. They usually require the rehousing of displaced tenants, and greatly broaden the power of the Public Housing Authority. In the proposed Nebraska bill, which was killed, the individual members of the authority were given unlimited powers to issue subpoenas, require the attendance of witnesses, and the production of books and papers in their capacity as a research organization.

The redevelopment of rural slums and the construction of farm dwellings which are to be tax-free until fully paid for are included in several of these proposed bills.

These bills have the strong support of the National Public Housing Conference, Inc., the AFL, and CIO.

Objection is made to this sort of redevelopment act for the following, and other reasons:

(a) It is a housing bill, not an urban redevelopment bill. The emphasis is on the construction with public housing for the low-income group. The redevelopment of the area for the benefit of the city as a whole is largely incidental.

(b) Placing the administrative control in the hands of a Public Housing Authority would tend to discourage the participation of private enterprise in urban redevelopment.

(c) A redevelopment program should not be under the control of any special interest group whether they be public housing officials or a manufacturers association.

(d) These bills do not mention the Planning Commission, and give the Public Housing Authority many of the Planning Commission's normal responsibilities. There is very loose control over the selection of areas to be redeveloped. No provision is made for public hearings.

From statements of congressional leaders, it seems evident that federally subsidized public housing will continue for some years to come, but probably with greater local controls. The part of public housing in the future development of our cities, therefore, cannot be ignored whether we are in favor of it or not. But the housing of the low income group is only *one* of the problems involved in the redevelopment of urban blighted areas and should not be the controlling feature.

Redevelopment Agency as an Arm of the Local Government

During the last year a third type of redevelopment enabling act has been proposed which sets up an entirely new agency as an arm of the local government, and which is made responsible for the redevelopment program.

Bills of this general type have been passed in Alabama, Indiana, Colorado, Maryland, Michigan, and Pennsylvania, and have been introduced in Ohio, the District of Columbia, California, Connecticut, and Wisconsin.

These enabling acts are not primarily housing bills, nor are they anti-public housing bills. They are drawn to permit the cities to undertake the redevelopment of slum or blighted areas in accordance with a comprehensive plan and with the objective of securing the highest and best use of the area. This use might be commercial or for a transportation terminal or for medium or low rental housing or for public buildings and facilities. The program is administered by the Redevelopment Agency, a department of the local government composed of representative citizens, and set up as a corporate body with powers to assemble land by eminent domain and to issue bonds, receive grants, clear the site, and sell or lease the area in whole or in parts to private individuals, firms or corporations, or to public agencies, such as school and park boards or public housing authorities. Suitable controls are set up which assure the development in accordance with the plan and in a manner to protect the public interest.

Public hearings are required before the area to be redeveloped is designated, as well as before the official acceptance of the detailed redevelopment plan by the local legislative body.

The advantages claimed are:

(a) It encourages the wide participation of private enterprise and the use of private funds.

(b) It provides for the redevelopment of the area so as to benefit the city as

a whole, and is not primarily to provide additional housing for one income group.

(c) No particular social scheme or economic theory is being emphasized.

(d) The control is wholly local.

Under these enabling acts, if private enterprise is not interested, land set aside for low rental housing could be purchased by the Public Housing Authority from the Redevelopment Agency. The location, magnitude, and type of housing built in the area would be controlled by the Redevelopment Agency, the Planning Commission, and the local legislative body in the general public interest.

Of the three types of legislation, the third appears to be growing in favor as most successfully meeting conflicting viewpoints.

Several cities have set up and figured test projects for the redevelopment of slum areas. Virtually all indicate a considerable gap between the cost of land assembly and resale. Just how this loss will be absorbed and bonds paid off is not faced in any of the bills reviewed to date. The general feeling appears to be that guarantees or grants from the state or federal government will take care of this, and that the great benefits to the entire community which would accrue from a sound redevelopment program well warrant this aid. Legislation providing federal assistance for redevelopment is now being considered by several congressional committees, but it is thought that such aid will be very limited.

In most bills in all groups, funds for the assembly of land are provided through the sale of bonds which are a lien against the redeveloped area only and do not affect the bonded debt limit.

The recently passed Indiana bill, which affects only Indianapolis, is unique in that funds for land assembly are secured through a small tax, the municipal area being established as a special taxing district. This amounts to ten cents per $100 of valuation for the first two years, and five cents thereafter.

A Michigan act permitted funds to be raised either by a tax levy on a special district, or sale of bonds. If the funds for land assembly were limited by tax receipts, there presumably would be no deficit. In many states, such as Ohio, there are real estate tax limitations which would not permit this type of financing.

Visualizing the Possibilities of Urban Redevelopment

THIS striking illustration and caption are from a notable English pamphlet, "Living in Cities," by Ralph Tubbs, published by Penguin Books.

The pamphlet makes a strong plea for rational city development as contrasted with recent attempts to "escape to suburbia." In many of the scattered and largely uncontrolled real estate subdivisions that have sprung up in recent years around the fringes of large cities, as the author points out:

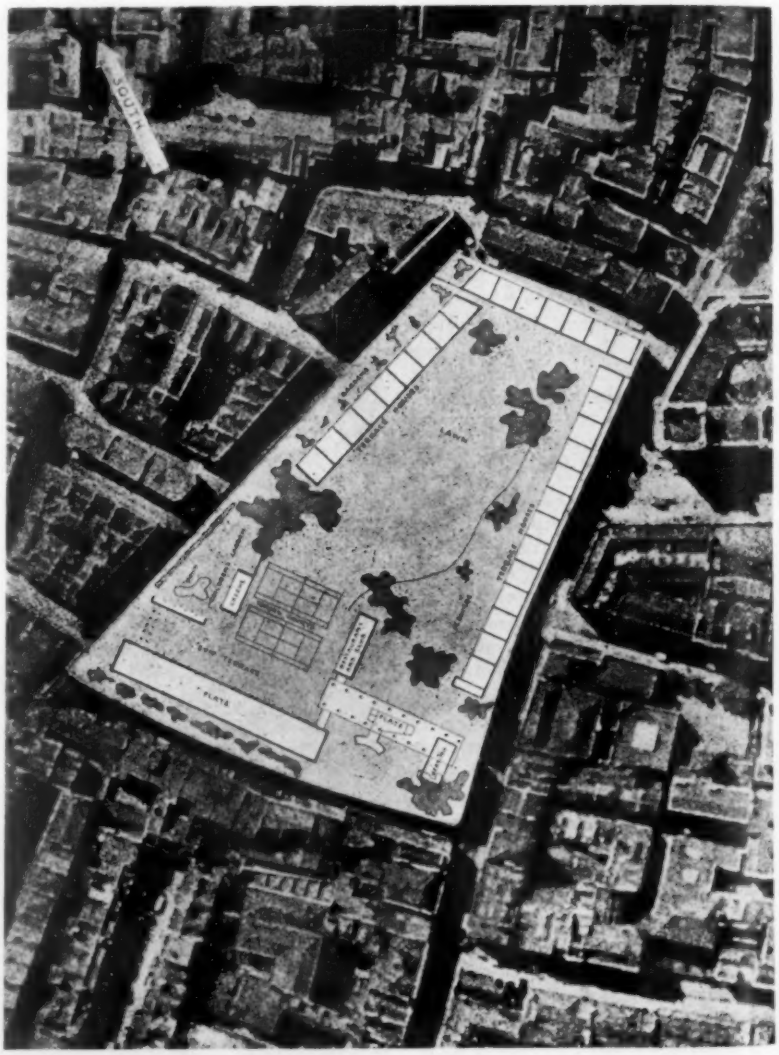
"The community life of the town, the friendliness of the market, and the comfort of surrounding buildings are all missing; time, money, and energy are wasted in wearisome traveling; and each new suburban house pushes the country further away.

"Let us put a stop to this suffocating expansion and reconstruct the centers of our cities, so that we can again live in them and glory in them. Let us give the countryside new vitality by putting it to work again. Let us regain the thrill of passing from town to country.

"Man may enjoy an almost infinite number of pleasures: pleasures of the mind, of music, of drama, of painting, of architecture, of the beauties of nature, of landscape, of trees and flowers; pleasures of company, of conversation and the meeting of friends; pleasures of physical fitness, of playing games; pleasures of relaxation, of bathing and basking in the sun—yet towns have been built with little provision for these pleasures, as if life were rather a grim business.

"Henceforth this must be changed. Open spaces are a first need; and may I make here a special plea for the greater use of water in cities—peaceful open stretches of water, quiet dark pools and running streams. Some pleasures require special buildings. We must build them, and make certain too that they are built in the right places. Other pleasures are best enjoyed at home. It must have the necessary accommodation.

"The city must be planned with a sense of the fun of life."



Compare the results of planning with existing chaos. In this use of space, the same number of people in the same area can be accommodated, but here they have lawns and trees and efficient services.

Resourcefulness Keynotes Sioux Falls Street Department

By BERT T. YEAGER
Street Commissioner
Sioux Falls, Iowa

The author

FOR SEVERAL years before the war, the population of Sioux Falls had been increasing at the rate of a thousand persons a year and the residential building program averaged three hundred new dwellings each twelve months. The problems this population growth made for the street department were tremendously augmented shortly after the outbreak of hostilities when the Army Air Force Technical Training Command established one of its largest schools for combat radio operators at the edge of the city. However, despite a virtual cessation of construction, manpower difficulties, and equipment shortages, we have been able to meet all the demands of local residents, and even to increase public services rendered by the Street Department. Construction and maintenance of all roads and streets within the city limits, city curbs and gutters, sanitary and storm sewers, sidewalks, and sewage all come under our jurisdiction.

Construction Plans

The department expects to undertake several necessary projects during the present year. On the agenda is about $100,000 worth of sanitary sewers which will be undertaken if bids are within reason. (It should be mentioned in passing that the Sioux Falls city administration is strongly in favor of the contract system of handling public works and calls for open competitive bidding on all projects other than regular maintenance work. Last year saw completion of a $260,000 addition to the municipal sewage disposal plant, handled by local contractors.) In addition to the storm sewers, the 1945 program includes about 240,000 yards of sealing with oil and gravel chips or pea-sized gravel. The work will be handled by street department maintenance crews, but public bids will be asked for the 80,000 gallons of oil required.

"Face-Lifting"

Maintenance of streets, sidewalks, and sewers requires an average yearly expenditure of about $80,000. The department employs between fifteen and twenty men during the winter months when snow removal is the principal occupation, and a maximum of thirty-five men during the summer months. An eight and one-half hour work day is observed five days a week, and a five and one-half hour day on Saturdays.

Maintenance of Sioux Falls city streets means not only snow removal in the winter and cleaning, sweeping, flushing, and patching in the summer, but some rather large replacement or "face lifting" projects as well.

During 1880-81 the streets in the business area were paved with stone blocks, quarried from local stone. In 1914 most of these pavements were replaced with bitulithic, asphaltic concrete, or wood-block pavement.

City Asphalt Plant

There are still several stretches of downtown streets, however, where the original stone blocks are still in service. One of the largest and most important improvement projects undertaken during the last year by the Street Department was the surfacing of East 8th Street, one of these stone block streets. Traffic is heavy in this street and it is crossed by numerous tracks of five different railroad companies. This project required eight hundred tons of asphaltic surfacing.

The department built and maintains a small asphalt plant including a 1,000-pound pug mill, drier, patcher, and conveyor near the center of town and the asphalt was plant-mixed from this plant. While the job was running, the plant production averaged one hundred and twenty-five tons a day. Street department crews laid the 8,400 square yards of asphalt on 8th Street for approximately six dollars per ton, or fifty cents per square yard.

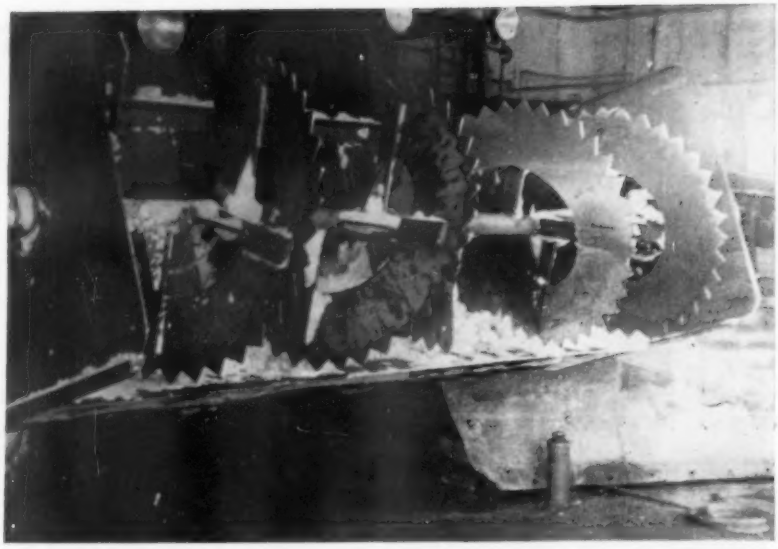
In summer maintenance of unpaved streets requires about 25,000 cubic yards of gravel each year. The department has a gravel pit located about four miles southwest of the city. Here a Koehring 301, ¾-yard dragline loads to a Cedar Rapids 9x36 crusher with vibrating screen. City-owned trucks make the run between the pit and the city.

In the fall, the brightly colored leaves on the thousands of black walnut, maple, and oak trees which border almost every street in town are a beautiful sight. But for a long time they were only a headache to the street department because it was such a nuisance to pick them up. The problem was turned over to R. W. Walter, shop foreman at our well-equipped street department repair shop. With the assistance of four other regular employees, he designed and created "Major Puffle." The "Major" is nothing more than a large vacuum cleaner with a twelve-inch suction fan which sucks the leaves from the streets in great gulps.

Snow Is a Real Problem

During the winter, snow removal is more than enough to keep us busy. Sioux Falls is smack in the heart of the nation's snow belt, and when the north wind isn't blowing a howling blizzard, the west wind is lugging along another snowstorm. Stockpiled sand, treated with ordinary salt (for weather above zero), and calcium chloride (for sub-zero weather) is spread by a mechanical spreader on icy streets in outlying areas where snow removal is not attempted. In the business district, however, snow removal is complete and thorough. Two Caterpillar motor patrols, a Coleman four-wheel drive truck with cable controlled V-plow and wings, and a lighter truck with a blade plow as well as two tractors with bulldozers are available if needed.

Since snow is not permitted to accumulate, it is seldom necessary to use the heavier units. Usually the patrols blade the snow to windrows in the center of the streets where it is picked up by a conveyor and loaded to trucks. This conveyor was also built by the city repair shop crew and con-



A closeup of the jaws of the snow conveyor built at the Street Department's shops.

sists of an old truck chassis on which a large screw has been mounted at the jaws of an elevated conveyor which carries the snow up and onto the trucks. Snow removal progresses at an average rate of five yards a minute.

Through a fortunate arrangement with an elevator firm, the city obtains all of its wire rope at small cost. It is the elevator firm's policy to replace all steel cables on elevators every twelve months. The used cable, which is preformed wire rope with lots of life left in it, is made available to the Sioux Falls Street Department. It is ½-inch to ¾-inch in size and can be used for scrapers, bulldozers, snow plows, a small shovel loader, and with a mudjack or small clamshell in cleaning settling basins and sewers. Lengths of up to three hundred feet are used with the drag bucket to clean storm sewers between manholes whenever it is necessary.

Sioux Falls Street Department Equipment Includes

23 Trucks
1 Wrecker with hoist built by the Street Department
1 Asphalt distributor truck
1 Coleman four-wheel drive truck with V-plow and wings
1 Street sprinkler or flusher
1 Caterpillar No. 10 motor patrol
1 Austin Western sweeper
1 Caterpillar No. 12 motor patrol
1 International TD18 with bulldozer
1 Caterpillar 50 tractor with bulldozer
1 McCormick-Deering industrial tractor
2 Allis-Chalmers tractors
1 Austin Western street sweeper
1 Snow loader built by the Street Department
1 Spray machine for patch work built by the Street Department
1 Worthington 105 air compressor
1 Mud Jack built by the Street Department

At Gravel Pit

1 Cedar Rapids 9x36 crusher with vibrator
1 Koehring 301, ¾-yard dragline
1 Two and one-half yard H & H scraper
1 One-half yard Continental scraper

At Asphalt Plant

1 One thousand-pound pug mill, drier, batcher, and conveyor built by Street Department

Bernard Shaw Expresses Himself on Vital Statistics

IN dealing with a disease," says Bernard Shaw in his 1944 book, 'Everybody's Political What's What.' "the first thing a sanitary authority has to ascertain is its prevalence, and whether and how fast it is increasing or decreasing. These figures it must gather from the death certificates of the doctors who give as the cause of death their diagnosis of the case. Now not only may a diagnosis be erroneous; but doctors do not always give the same name to the same disease.

"When I had a seat on a Public Health committee, I took the unprecedented step of examining our reports of vital statistics, printed by us at great expense, and never either circulated to the public nor read by any member of the committee except myself. We had to deal with a terribly overcrowded borough in which three gigantic railway terminuses, with their square miles of good yards, had displaced thousands of our people and crowded them into very insanitary tenements. Typhoid fever was endemic. On looking it up I found the death rates less than I expected, and would have been misled had my eye not been caught as I turned the pages by another figure under the heading Enteric Fever. I happened to know that typhoid and enteric are two names for the same disease. The doctors used them indifferently. . . .

"I got the typhoid ambiguity removed, and incidentally imposed on the committee as a person of profound learning; and since then doctors have been officially instructed that they must use the same name for the same disease in death certificates, and never fall back on heart failure or dyspnoea (shortness of breath) as a cause of death when they are puzzled. But new names are easily found; and until diagnosis becomes much more scientific, mortality statistics will need very careful sifting by expert statisticians (not by doctors) before legislation can be based on them safely. . . .

"Vital statistics are vitiated not only by the fact that diagnosis is very far from being an exact science. . . they are the work, not of skilled statisticians but of amateurs who imagine that simple arithmetic qualifies them to prescribe their nostrums to public health authorities for compulsory national administration. . . .

"The public services need therefore a department of statistics and mathematics to which the statesman can submit for skilled examination all the correlations involved in legislative projects and current administrative practice, as well as to prepare such periodical budgets of information as the census and the statistical abstract. Official figures are not infallible, as they have to be collected and assembled by fallible mortals; but as there are degrees of fallibility we can select our statisticians by the method of imagining the possible extremes, and determining the most eligible spot on the scale between them. At the bottom of the scale of authority are the professions or individuals whose incomes are at stake. At the top of it are the persons gifted by the Life Force with a passion for veracity and accuracy in the abstract which can find employment only in an otherwise impartial collection, correction, and correlation of information. A public department of statistics would attract these pernickety persons as Civil Service candidates; and such a department would be at the practicable top of the scale of authority."

This chapter ends with a strong plea for less overcrowding. "Overcrowding is, in fact," says Mr. Shaw, "more deadly than hunger or cold. . . . 'One Citizen One Room' is far more pressing than "One Man One Vote."

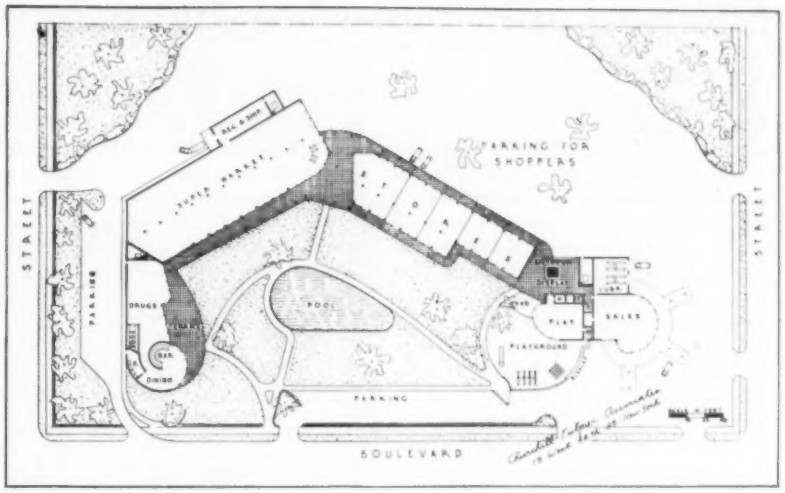
Shopping Center Designed to Attract Shoppers

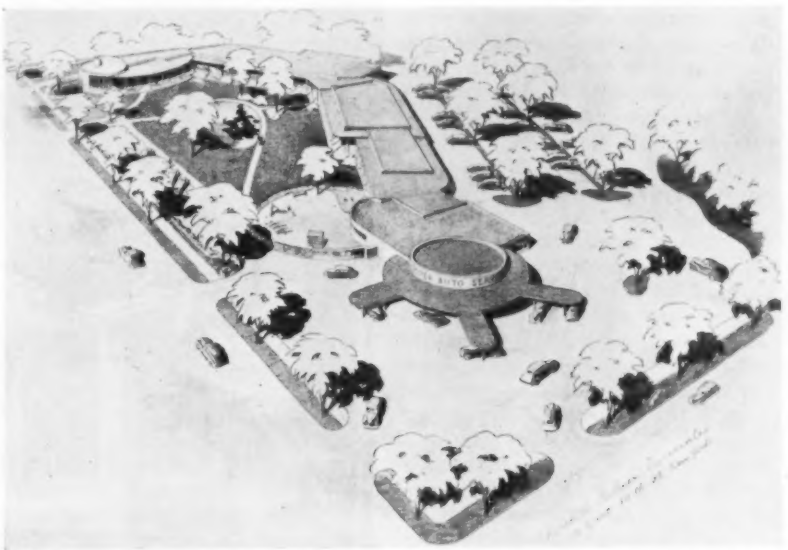
THE shopping center of which a plan and an artist's conception are shown here is intended for use either at the center of a small community or on the way downtown in a larger one. The buildings are planned so that shoppers can go from store to store by crossing a landscaped plaza with comfortable benches and a picturesque pool. There is a supervised play area, furnished with play equipment and convenient to the shops and parking areas for the care of the youngsters while mothers shop.

Adequate off-street parking for shoppers is so arranged that pedestrians can walk from shop to shop completely safe from automobile traffic. The approach from the parking lot is through attractive arcades, which makes this another front instead of an untidy back-yard. The stores have also an unobstructed pedestrian access from the local neighborhood as well as motor access from the main thoroughfare.

The buildings are set well away from the main thoroughfare because speeding motorists do not window shop. The decision of a passing motorist to stop is based on the appearance of a shopping center as a whole. The motorist always approaches at a tangent and the curves of the building are adjusted to give him the best possible long distance sight lines toward the service station, drug store, restaurant and bar with dining terrace, and super-market, which are the main elements of the scheme.

The plan is based on data gathered by the *National Petroleum News* and *Pencil Points*. It is intended not only to meet the needs of new communities but also to provide a means of implementing improved merchandising programs. Henry S. Churchill of Churchill-Fulmer Associates, Architects and City Planners, is the designer.





Plan and artist's conception of a community shopping center by Henry S. Churchill

EDITOR'S NOTE: A new publication of the National Committee on Housing, called "Planning Neighborhood Shopping Centers" by Marcel Villanueva and subtitled Purchasing Power as a Yardstick in Developing New Patterns for Commercial Centers, points out that "neighborhood control is not widely understood by the public at large or by municipal officials. . . . Little importance has yet been given to the provision of adequate and well planned shopping areas which will afford convenience to the shopper, a profitable market to the merchant, and a resultant sound investment to the real estate owner and the municipality." Copies of it may be obtained from the committee, 512 Fifth Avenue, New York 18, at one dollar a copy.

Canadian Mayors Elect and Resolve

AT the annual conference of the Canadian Federation of Mayors and Municipalities held at Toronto June 18 to 21, the following officers were elected: Honorary President, Mayor R. H. Saunders, K. C. Toronto; President, Mayor J. W. Cornett, Vancouver; Vice-Presidents: Mayor Garnet Coulter, K. C., Winnipeg; Mayor R. T. Forbes, Fredericton; and Mayor Lucien Borne, Quebec; Honorary Secretary, Mayor John W. Fry, Edmonton; Honorary Treasurer, Mayor Edward Wilson, Verdun; Executive Director, Jessica A. Allan, Montreal.

Among the resolutions adopted was this on government properties:

Whereas, under the British North-America Act, 1867, the property of the crown (whether Dominion or Provincial) is not subject to municipal taxation;

And whereas, at the time the Act was passed only a few properties belonged to the Crown such as Post Offices, Court Houses, Penitentiaries, etc.;

And whereas, since that time and particularly during the war years both governments have vastly increased their holdings and have embarked upon many forms of commercial business never contemplated in 1867;

And whereas, municipalities are required to provide services for government buildings, such as roads, fire protection, police protection, sewer facilities, etc., etc.;

And whereas, it may be expected for some years that the number of government properties in the municipalities will not diminish;

Therefore be it resolved, that this conference reiterate its stand that some measure of relief for the municipalities must be worked out and that, pending such an amendment to the British North America Act as will require the Governments to pay taxes in the ordinary way, provision be made by way of grants or otherwise to offset the value of the services contributed to them as aforesaid.

Should Cities Subsidize Industries?

WITH the return of veterans and back-flow of war workers from emergency jobs outside the state, community leaders will and should be concerned about full local employment." Following this comment Harold V. Miller, Community Planner of the Tennessee State Planning Commission, discusses in the June issue of *The Tennessee Planner* the timely problem as to whether or not communities in his state should subsidize industries to secure local employment. During the last decade in many parts of Tennessee the practice of extending public subsidy to industries was carried too far. Some cities offered subsidies in the form of tax reductions or complete exemptions for a period of years, or supplied municipal services, such as water, at a low flat rate or no cost at all. In other cases municipal factory buildings were constructed to be occupied at little or no rent, or labor was recruited and personnel trained at public expense as special inducements.

Limited concessions, in certain instances, have led to the establishment of substantial industries which are contributing steadily to local business and economic betterment. Experience has shown, however, that where the industry was not carefully chosen or where the element of subsidy was out of proportion, the cost has been far above the benefit received. Any community extending public subsidy takes the risk that it may be dealing with an operator who has no intention of becoming a permanent part of the community. Generally speaking, an industry which makes heavy demands for public subsidy as a condition of "moving in" is one which is as likely to "move out" when the subsidy ends or when a competing community raised the bid.

From 1930-1940, more plants seeking subsidies or responding to subsidies in Tennessee were in the textile and garment field than in any other major branch of industry. Some of these drove extremely hard bargains, not only asking much from the community in the way of special favors but sometimes binding the community by contract to exclude competitive firms. One Tennessee city of slightly more than 1,000 population was, in 1937, engaged in the construction of a private factory building whose financing by a municipal bond issue meant a local indebtedness of nearly $40 per capita. The contract between city and company specified erection of a steel and concrete building with at least 30,000 sq. ft. of floor space, rent free for ten years, with steam heat, sprinkler and water disposal system, and the city was to bear all municipal taxes assessed against the company as well as to guarantee to replace *all* losses by *fire or otherwise*. During this period the city was bound not to erect another factory which would employ female labor. The company for which the building was constructed suspended operations and moved out after about four years.

Since Tennessee, through the TVA, is a much better market than in the past, it is recommended that action be along the lines of logical development and of expenditures for public improvements based on the real advantages and needs of the state and the particular community. Applicable to all states and communities is Mr. Miller's conclusion: "Now is the time, if ever, for the state and all its component parts to adopt definite and firm policies in the matter of subsidy . . . to promote the establishment of industries which will contribute to a nicely balanced industrial structure and which are based on the many real resources and advantages which the state and its communities can offer."

Ventura's Honor Roll Board

VISIBLE evidence of the part that the sons and daughters of Ventura, Calif., are playing in the fight to maintain our democracy is the memorial board bearing 3,200 names, which stands in the City Plaza—a monument to the vision of local citizens—a tribute to Ventura's children.

Officially dedicated during solemn Memorial Day rites, the 75-foot-long board contains space for 3,600 names. Each name is printed on a 2 x 8-inch zinc plate, bolted on boards.

A special center section, guarded by the figures of two women mourners, contains 112 names. Overhead is a quotation from St. Paul: "I have fought a good fight. I have finished my course. I have kept the faith."

The women mourners, designed in clay and plaster casts, were executed by Frank Nagy, noted sculptor, who has been stationed at the seabee base at Camp Rousseau, Port Hueneme, with the rank of chief carpenter's mate.

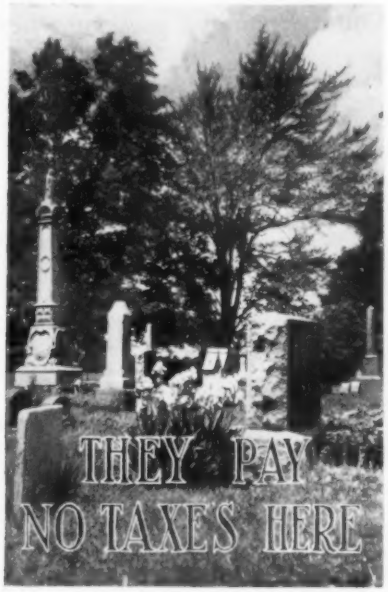
Eligibility rules for the names appearing on the board are the same as the terms for those who are eligible to receive the benefits of the GI bill of rights. Venturans were asked to donate $1.25 to "put a name on the board," and defray expenses.

While construction work on the board is completed, Fritz Huntsinger, local honor roll board chairman, emphasized the memorial is "temporary," and will be placed in whatever building veterans of this war choose.

The framework, set in concrete, is braced by pipe donated by local corporations, including the Tide Water Associated, General Petroleum, Continental Oil, Chanslor-Canfield, and Midway Oil companies.

Reports That Compel Attention

Here are diverse and outstanding examples of original and telling covers for municipal reports. Some are elaborate two-color jobs, while one is a simple mimeographed sheet



A town report presented as a school book, an idea with a New England flavor, and from the Middle West, an example of the humorous approach.

THE covers from municipal reports reproduced here have been selected because they are original and provocative. At the left is the cover of the annual report of East Hartford, Conn., a prosperous New England town. This cover is a stylish black slate with a red border and the report it contains is gotten up, as the President of the Town Council, "textbook style" in chapters.

To the right of the East Hartford report is shown the cover of the annual report—not of Eden—but of Royal Oak, Mich., whose city fathers use a picture of a graveyard to remind the taxpayers that only the dead pay no taxes.

At the top of the page on the right is a reproduction of the mimeographed cover of the Chicago Welfare Administration. Here a simple graph tells a story that is made vivid by the little drawings that suggest the types of services rendered. A report does not have to be elaborate to be effective.

Just below the Welfare Commission report is the ingenious report of St. Johnsbury, Vt., for 1944. How each cent of the local tax dollar was divided among the principal activities of the town government is shown in pictures by Elbert J. Lynch, a local artist.

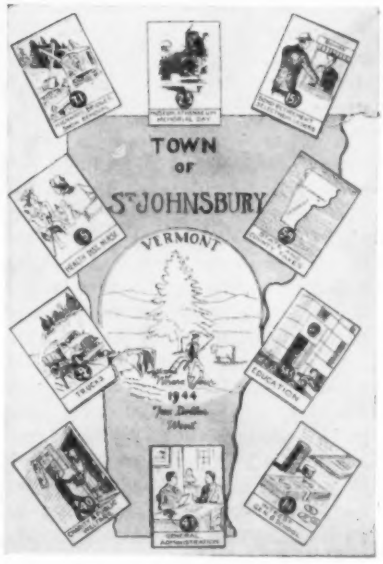
Finally, in the lower right hand corner is the first report of the San Francisco Planning Commission, of which Michel D. Weill is President and L. Deming Tilton Director of Planning. This report has an "angle" or focus to accent its message. A serviceman is pictured looking out over a panorama of the city and the message, signed by Mr. Weill and printed in white on gray, is as follows:

HIS CITY

He has fought to protect it, he has left his loved ones in its trust, he lives for the day he will return to it. We, in his home town, are responsible to him for its growth, its development, its welfare.

Carefully, now, we must prepare the plans for its future, his future. They must be practical plans, comprehensive challenging plans that solve today's problems, set the pattern for tomorrow's improvements and form the basis for a constant, continuous growth—a Master Plan, ever changing, building, and expanding! The City Planning Commission, through this monthly publication hopes to bring to you, the citizens of San Francisco, the story of the progress of the Master Plan—what it is, how it is formulated, how it is activated, how it grows!

Your comments, your suggestions, your ideas are welcomed, your support is sought. We know that you will join with us, with all San Franciscans, in sponsoring the program that will provide the best for the future of our city, for the future of *HIS CITY!*



Drawings to illustrate statistics are used to good effect in two of these reports. The text on the bottom one is quoted in full in column two of this page.

Photocopying Brings County Court House Up to date

Ability to furnish facsimile records has many advantages for municipal and county officials

By LESLIE A. PRICE
County Treasurer
Chatauqua County, N. Y.

IN A dark basement room of the Chatauqua County court house at Mayville, N. Y., is installed an inexpensive photocopy machine for making exact duplicates of letters, documents, and drawings. The copier is on a long low table and has an electrical connection at one end. Convenient to it are three washing trays for developer, fixer, and water. At the far end is a large piece of glass for squeegee use and an electric drier.

Many uses have been found for it, since it is possible to reproduce with this copier, made by the American Photocopy Equipment Co., Chicago 14, Ill., almost any ordinary sized paper in a few minutes. For example, the treasurer has been able to reproduce and place in orderly file numerous important records, such as proofs of publication for tax sale and redemption advertising affecting property titles. Formerly these documents were folded in old-style legal files, requiring laborious search and constant wear at the folds when reference had to be made to them. Now exact copies of old records, inserted chronologically in a loose leaf book, are made available at the public desk for anyone to see, thus saving time for both the office and the public. An additional copy is made at the same time and kept in the County Treasury vaults.

The same procedure has been used for other valuable records, such as lists of local laws where exact reproduction is important. Even watermarks show in this type of reproduction.

Inter-department confusion caused by overlapping authorities and laws can often be cleared up by an exchange of photocopies of letters on the subject in dispute. Quite often a state official at Albany gets erroneous information from some local official, say regarding the description of state land. Copies of the deed, the assessment roll page, the collector's return, and other data quickly settle the matter and obviate lengthy correspondence, misunderstanding, and even time-consuming and expensive trips.

Those familiar with property taxation methods and procedures know how easy it is to confuse and be confused in tax records relating to titles. For years it has been very difficult to produce records substantiating county deeds in court. Now, however, copies made by this method of every item connected with a recent tax sale—proofs of publication, of the part of the newspapers in which the advertising appeared, of the sale certificate, of the State approval, and of all relevant matters—were introduced into the record of the Supreme Court of New York.

Facsimile copying facilities are potent in establishing close contact with the individual citizen. For example, the Corporation Counsel of one of the county's cities was asked for a hand-drawn copy of an old land map which was attached to an old tax roll. It was only a matter of minutes to fulfill inexpensively the substance of the request. Servicemen's families have been supplied copies of death notices, etc., so insurance could be collected, and incidental services of immediate practical value have, when possible, been rendered. Indeed, new opportunities to use a copier to increase efficiency in public offices constantly arise.

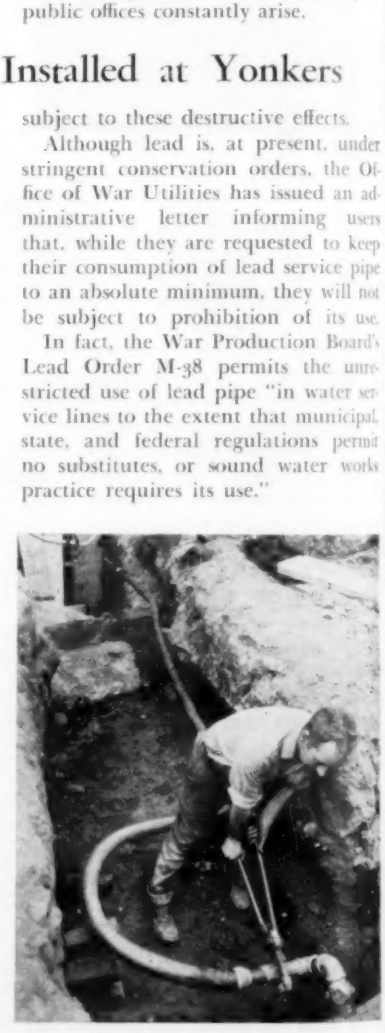
Lead Service Pipe Installed at Yonkers

THE city of Yonkers is located on hilly terrain and, as a result, water pressures in some areas are comparatively high. The service pipe shown in the accompanying illustration supplies water to an industrial plant located in a high pressure area. It is made of 2-inch lead pipe Class 100 bearing the Lead Industries Association's Seal of Approval. An extra long swing in the gooseneck was used to provide ample allowance for expansion. The entrance of the pipe to the basement of the building is through a sleeve set in the wall. This sleeve is packed with oakum and calked with lead wool. This kind of sleeve performs the double function of protecting the pipe from abrasion and also from the action of any free lime present in the masonry.

The use of this 2-inch pipe illustrates practicability of the pipe designations established under Federal Specification WW-P-325 issued September 6, 1944. This specification provides for three standard weights of lead pressure pipe and designates them as Class 50, Class 75, or Class 100 and refers to the safe working pressure of 50, 75, and 100 psi for the respective classes. These allowable pressures, dimensions, and weights of the various classes remain generally in conformance with previously established commercial standards. The use of lead service pipe is good insurance against the expense and inconvenience caused by corrosion and scaling since lead is not subject to these destructive effects.

Although lead is, at present, under stringent conservation orders, the Office of War Utilities has issued an administrative letter informing users that, while they are requested to keep their consumption of lead service pipe to an absolute minimum, they will not be subject to prohibition of its use.

In fact, the War Production Board's Lead Order M-38 permits the unrestricted use of lead pipe "in water service lines to the extent that municipal, state, and federal regulations permit no substitutes, or sound water works practice requires its use."



Connection being made at Yonkers from a high pressure main to a lead service pipe.

Waukegan Gets Needed Water Storage

By H. B. BLECK
City Engineer
Waukegan, Ill.

THE NEED for elevated storage has long been recognized in Waukegan. As long ago as 1933 the construction of an elevated tank was included in a program of useful public works suggested to the federal authorities. Nothing came of the suggestion until 1938 when we filed an application for a PWA grant. Later, in July of 1941, a new application was submitted to the PWA for a grant to aid in the construction. Before anything was started, however, war came and the project was again shelved until August, 1942, when an investigation of the water facilities at Great Lakes by the Bureau of Yards and Docks definitely indicated the necessity of a supplemental water supply from the Waukegan water works for the Great Lakes Naval Training Center. The Naval Center had expanded so rapidly that the water facilities of the station did not keep pace with the building expansion program.

At the suggestion and invitation of the Federal Works Administration an amendatory request to our application to PWA was filed with the FWA. This entailed a change in the tank design from steel to reinforced concrete and the addition of a booster pumping station and a 12-inch pipe line from Waukegan to the Great Lakes water system.

The project plans were completed in October, 1942, and soon afterward contract was negotiated for the construction of the project. Award of contract was made to the W. E. O'Neill Construction Company of Chicago. On November 11, 1942, construction began and the booster pumping station and pipe line were completed in record time and served the Navy on a number of critical occasions when its water supply was fouled with needle ice at the Great Lakes raw water intake. But there was considerable delay in the construction of the tank for work proceeded during the worst weather conditions imaginable, in the severe winter of 1942 and 1943, and there were also frequent stoppages of work due to priorities. It was finally completed and officially placed in operation on about July 1, 1943.

The usual precautions against freezing were taken. All of the aggregate and water was heated and the work protected by means of tarpaulin enclosures and salamanders. In order to prevent drying out of the concrete, evaporating pans were placed over a number of the salamanders on the inside of the tank structure during the entire curing period.

The new 800,000-gallon water tower for Waukegan, Ill., constructed with the aid of Federal Works Agency Lanham act funds, which supplies water to the Great Lakes Naval Training station and provides Waukegan with a much needed elevated reserve supply.

FEDERAL WORKS AGENCY PHOTO

The entire installation fulfilled the purposes for which it was constructed and has justified the decisions of those who planned it.

Details of Construction

The tank itself has an internal diameter of 70 feet and a depth of 28 feet to provide a capacity of 800,000 gallons. The tank walls consist of a concrete cylinder with a wall thickness of 10 inches on the outside of which were placed stress rods, then an additional 5-inch thickness of concrete, making the total shell thickness of the tank 15 inches.

A reinforced concrete dome was cast over the top of the tank. The tank rests on a floor slab 2 feet 9 inches thick, supported on two concentric concrete cylinders having internal diameters of 25 feet 2 inches and 59 feet 2 inches respectively. The wall thickness of the supporting cylinders is 10 inches. The height of the supporting cylinders from the top of the footing to the underside of the tank slab is 52 feet 5 inches. The entire tank structure is supported on a concrete reinforced plate foundation 74 feet in diameter and 2 feet 9 inches thick. The supporting walls and tank walls were all cast using slip forms in a continuous operation.

A 4-foot internal diameter inspection well with walls 8 inches thick extends through the center of the tank to a point above high water elevation. The tank is supplied with a 24-inch cast iron riser pipe constructed on the inside wall of the inside supporting cylinder which extends to a point 3 inches above the tank floor. A 12-inch cast iron overflow pipe and tank drain is also constructed on the inside wall of the inner cylinder.

The foundation slab was constructed directly on a hard, dry, red clay soil which extends to an undetermined depth and was found to be of ample bearing power. The overflow of the tank is connected to a 24-inch storm sewer some 50 feet distant from the tank. Overflow of the tank is prevented by a Ross altitude valve and is further controlled by means of a Bristol telemeter apparatus which is connected to the pumping station over leased telephone wires.

A special joint construction at the junction of the tank walls and inspection hole walls with the tank floor has been effective in preventing leakage. This joint consists essentially of a groove or slot adjacent to the tank wall which was filled with Volclay, over which was placed a mortar seal. In addition, the entire tank floor was covered with approximately a quarter inch of the same material.

Community Cooperation with the Military

By ELIZABETH GUNN

Secretary, War Recreation and Welfare Coordinating Council, Spokane, Wash.

SPOKANE was a jump ahead of Uncle Sam's fast-moving Army and Navy two years ago when a newly arrived special service officer suggested that a coordinating council between the military and the community be established. One had been functioning in the city since shortly after Pearl Harbor.

There are two large military hospitals in Spokane and four other military installations in or adjacent to the city. Besides this, Spokane is "leave town" for isolated bases miles away. The Mayor's Recreation and Welfare Coordinating Council acts as a clearing house for service centers, civic groups, and the military installations.

The Council is Adaptable

Godfrey Fry, Chairman of the Council, defines its functions as follows: to acquaint the community with the need for specific recreational and welfare projects and the expenditure involved; to delegate the development of these projects to the agency or organization in the community best equipped to accomplish the proposed purpose; to coordinate all service agencies within the community, clearing all proposed programs for recreation, thus preventing duplication and overlapping of effort; to exercise direct and specific control over undesirable conditions which affect the welfare and morale of the armed forces.

The work is done by an executive committee of five and a larger advisory committee. An office maintained by city funds is open daily from nine to five.

The Council posts a weekly bulletin at all installations. Servicemen like entertainment listed under the days of the week so that a glance will tell them what is happening on their day off. This bulletin is repeated in a local paper daily; it carries no advertising; its sole function is to get servicemen acquainted with Spokane.

Another activity of the Council is holding monthly meetings with special service officers from all installations and other conferences between service centers, civic groups, and the military whenever it is necessary.

As the war effort shifts toward the west and more veterans and patients return, the work of the Mayor's Coordinating Council has changed. It has cooperated with civic groups in furnishing ward dayrooms at the hospitals and in other welfare projects. Housing aid work has been jointly shared by the council, the Chamber of Commerce, and housing agencies.

A new project now being undertaken by the council is the establishment of a downtown dormitory for servicewomen. The Lutheran Service Center, already providing sleeping facilities for servicemen is planning on providing them also for servicewomen through cooperation with the council.

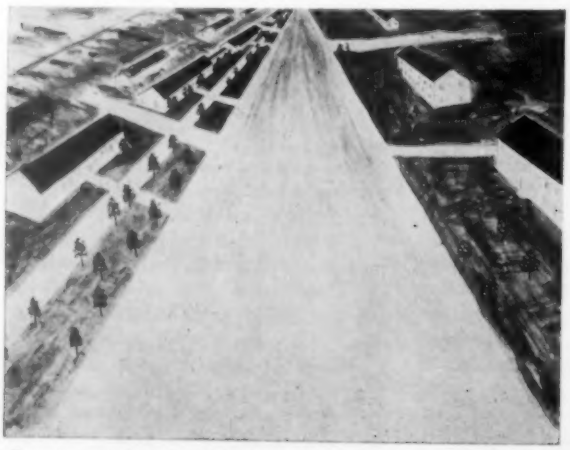
The largest direct aid project now engaged in by the council is aiding in the beautification of the grounds of Baxter General Hospital and the establishment of a Memorial Lane there for World War II veterans. The work is being done by a committee headed by J. Fred Austin, President of the Society of American florists. "It seems to me," said Mr. Austin, "that the ideal place for World War II memorials is at the hospitals to which the wounded and ill of that war are being returned."

Memorial of Flowering Trees

The memorial will be a lane of flowering trees, extending from the entrance gate of the hospital, past the headquarters to a memorial monument. This monument will contain the names of all the veterans for whom memorial trees have been planted.

Col. A. B. McKie, Commanding Officer of Baxter Hospital, says it has been found that working out of doors with growing plants and shrubs is excellent horticultural therapy for the patients. "A still greater benefit ensues," said Col. McKie, "when the patients know that the evergreens, the shrubs, and the flowers they are planting have been given by local people from their own gardens. Feeling he has a part in the community life is a strong factor in a soldier's rehabilitation. The work of committees such as Mr. Austin's is a great aid in giving the patient that feeling."

Otto A. Dirkes, Mayor of Spokane, considers the complete cooperation of the military an important factor in the council's success. "We were surprised," Mayor Dirkes said, "at how eagerly the military welcomed a responsible group for coordination with the community."



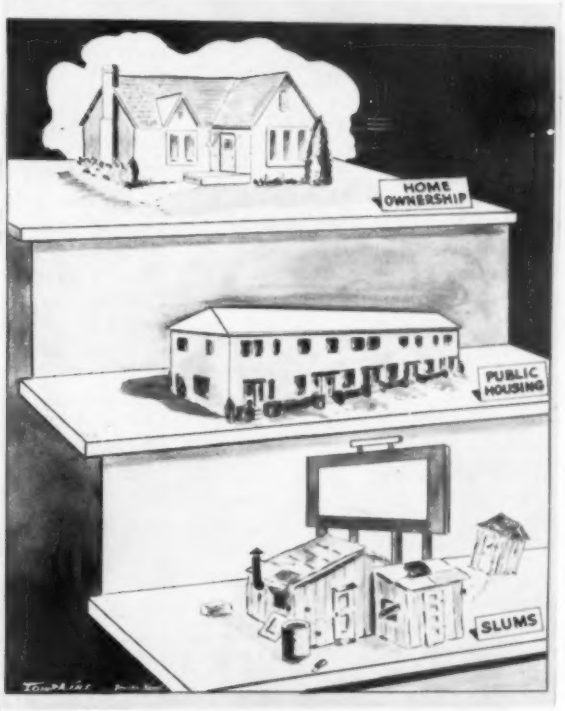
Drawing of the memorial lane of flowering trees planned by citizens of Spokane for Baxter General Hospital. The lane leads to a monument for war dead.

Sundeck furniture at the AAF Hospital at Fort George Wright, Wash., was contributed by the Veterans of Foreign Wars Auxiliary of Spokane.

Publicity Helps the Battle with the Slums

Proud of Dallas?
. . . See It's Slums!

STEPS UPWARD
Slums to Home Ownership via Public Housing



DALLAS, TEXAS, has joined the growing number of cities whose newspapers and civic organizations are using the powerful force of publicity in the fight for better housing and neighborhood conditions.

Readers of THE AMERICAN CITY will recall the pictures of Toledo slums reproduced from the Chamber of Commerce booklet, "This *Also* is Toledo," in the May issue of this magazine (page 79), and the article headed "Pittsburgh, Also, Faces the Facts," on page 79 of the July issue.

Above are shown, in reduced size, the front and back covers of a recent pamphlet of The Housing Authority of the City of Dallas, which contains, on its inside front cover, the following tribute to that city's leading newspaper:

"Again The Dallas Morning News, Texas' oldest business institution, has come forward with a challenging series of articles on housing conditions. This time Allen Quinn of The News staff, a newspaper man with a quarter of a century of experience behind him, went into the slums of Dallas to make a personal investigation of conditions, their meaning to the community, and possible solutions of the problem. His findings are reported in a series of twelve articles which appeared in The News, and which are reprinted in this booklet."

Another pamphlet available from the same source, also containing illustrated articles and cartoons reproduced from *The Dallas Morning News*, is entitled "Dallas Slums."

Tapping New Sources of Municipal Revenue

A COMPILATION by the American Municipal Association of miscellaneous sources which municipalities have adopted in recent years to supplement real property tax and other income follows:

1. *Admissions:* Usually a flat rate of one or two cents per ticket, or a fixed percentage of the price of admission to all amusements is imposed.

2. *Airports:* Only about 10 percent of all municipal airports pay their own way. All others are supported at least partially by a tax.

3. *Amusement Devices:* Many cities license automatic coin machines. Both the operator and the owners are taxed in most municipalities.

4. *Bicycle Licenses:* Usual license fee is 25 or 50 cents per year, which generally includes an inspection of the bicycle.

5. *Bowling Alleys:* Many cities license them; the fees usually are scaled according to the number of alleys.

6. *Business Licenses:* Many cities license business.

7. *Buses:* Butler, Pa., licenses buses at $100 per bus per year. Other cities have similar plans.

8. *Cigarettes:* A few cities have imposed a municipal tax on cigarettes.

9. *Circuses and Carnivals:* Fees are usually per day or per show and vary widely in amount.

10. *Fire Protection:* Many cities charge for fire protection furnished outside municipal boundaries.

11. *Garbage and Rubbish Collection Charges:* There is a growing use of special service charges for these services.

12. *Gasoline:* Municipalities in six states—Alabama, Florida, Missouri, Nevada, New Mexico, and Wyoming—levy municipal gasoline taxes ranging from one-eighth cent to two cents per gallon. A number of individual cities also levy gasoline taxes.

13. *Income:* Philadelphia is the only city with a municipal income tax.

14. *Parking Meters:* As of January 31, 1945, 431 cities were operating approximately 200,000 parking meters.

15. *Police Service Charges:* Some cities charge for special police services.

16. *Sales:* The municipal sales tax is used in a few cities, though not generally.

17. *Sewer Rentals:* Sewer rentals are being used increasingly.

18. *Taxicabs:* Many municipalities license taxicabs and taxicab drivers.

19. *Utilities:* There are various municipal taxes imposed on utilities.

New Taxes for Post-War Projects

ENDORSED by labor, service clubs, Chamber of Commerce, and businessmen in general, a new plan for providing for post-war financing for municipal projects went into effect in San Bernardino, Calif., at the beginning of 1945. The new set-up includes three ordinances adopted by the City Council and a charter amendment approved by the voters.

One of the three ordinances is intended to be a permanent measure; it provides for substantial increase in business licenses. The other two ordinances are emergency measures covering at present only the year 1945, and the funds provided by them are to be earmarked for the city's post-war development fund. They provide for doubling all business license fees, and for a 1 percent retail sales tax.

This plan has now been in effect for six months, and, basing his estimate on the quarter terminating April 1, 1945, the City Budget Director states that, together with the new 3 cent amusement tax, the return to the city's treasury for the full year of 1945 will be $638,000. To that amount, the sales tax will contribute $428,000, the amusement tax $90,000, and $120,000 will be gained by the higher business licenses.

Sales Tax Modified

As originally voted, the sales tax included everything sold in the city, even building materials. Upon protest by the builders and contractors, the City Council exempted materials used in construction projects. Also exempted were sales of tangible personal property where title passes outside the city limits and where said goods are to be used outside the city. By defining inter-city and foreign commerce, the Council prevented a local consumer from taking title to goods outside the city limits and then bringing them back to the city for local use.

Commenting on these three tax ordinances, Mayor W. C. Seccombe made the following statement:

"While we are fighting the war, we must not overlook the peace to follow. . . . We hope the unemployment period is not for long. We must see to it now and make preparations so it will be but temporary. Thirty major improvements have already been included in the post-war construction plans. Some of these are: street widening and improvement, vehicular and pedestrian underpasses, bridges, sewers, additions to schools, a new library, and a city airport. You will agree with me that our city is greatly in need of every one of these improvements. . . . We need money with which to do the actual construction. About $4,000,000 will be required. It is fully expected that the state legislature will make provision to allocate moneys to the city to defray half of the cost of such projects as are of state or common need. To get the state money, we must be able to match it. All the money raised under the post-war finance plan will be set aside and earmarked for the specific purpose for which it is collected. The fulfillment of that purpose will be made mandatory on this council and any future council by ordinance. Not one cent of it can be made available for any other purpose."

New York's Park Benches: A Correction

ON PAGE 99 of the May issue of this magazine there was published a diagram of a park bench reproduced from a drawing furnished to THE AMERICAN CITY by the Portland Cement Association.

It has since been learned that the 1942 notation on this diagram is the date when the diagram was redrawn in the P.C.A. office, but that this type of bench has not been used by the New York City Park Department since 1934.

The accompanying pictures show park benches of the type which has superseded the ones shown in the diagram previously published.

Two views of benches in New York City parks and playgrounds

Mosquito Control

(Continued from page 70)

ebb, they are more apt to become polluted, and when they are polluted luted, produce tremendous numbers of house-entering autumn mosquitoes.

Culex pipiens, which typifies this group, hibernates in cellers, sewers, and other damp places, and then in the spring sallies forth to lay its eggs in dumps and large bodies of malodorous water, in street catch basins, barrels and other water containers on home premises.

This autumn group of domestic mosquitoes may be controlled by filling or dredging of polluted marshes, by the emptying or covering of water containers on home premises, and by spraying larvicide on polluted water. Such measures are applicable to all breeding places except rivers, streams, and lakes which are polluted by sewage and industrial wastes. In this instance it is not the function of a mosquito control agency to remedy stream pollution, except by bringing such conditions to the attention of the stream polluters such as municipalities, industrial plants, golf clubs, taverns, and individuals. In most states sanitary water boards have authority to prevent stream pollution.

Miscellaneous Mosquitoes—In this group is the Anopheles, a clean water breeder whose choice of breeding places ranges from still water to running streams, and from hoof tracks to air plants in trees; another genus, mansonia, lays its eggs on the water surface where the larvae hatch, then dive and attach themselves to succulent host plants from which they obtain oxygen throughout the winter months. Several species of the hard biting three-hole breeders would come under this heading, as well as some with curved proboscises that cannot bite; and at least one super sanguine species that isn't satisfied to fill its stomach to bursting proportions, but insists upon drinking and evacuating fresh blood in a continuous stream until it is exhausted.

Machinery for Mosquito Control

City officials are familiar with construction machinery which is used for mosquito control, such as the dragline excavator, the dredge, and tractor drawn ditchers such as terracers, graders, bulldozers, and trenching machines, and perhaps the mole plow is not unknown to them; however, the types of spraying machinery shown in the accompanying pictures will be strange to them, as these have been the outgrowth of specialized mosquito control work.

The first of these unusual looking spraying units is called the Corner cutter in the Des Plaines Valley Mosquito Abatement District. This is a motorcycle with side car for spraying and is so named because, traveling along one side of a street, it cuts corners, spraying all four catch basins in one loop at street intersections. This machine will spray 450 closed catch basins or 600 open catch basins per day. It consists of a Harley-Davidson Motorcycle Model 80 with a side car mounted on the left side, equipped with 600 x 16-inch tires. Placed inside the package compartment of the side car is a 45-gallon commercial hot-water tank capable of withstanding 200 pounds pressure per square inch. The larvicide is ejected from the 45-gallon tank through a ½-inch neoprene hose to a hand-spring shut-off valve manufactured by the Chicago Faucet Company. A ⅛-inch standard pipe 42 inches long is attached to the faucet and terminates in a special nozzle which atomizes the larvicide and prevents dripping. The district has three of these units to cover 20,000 catch basins at two-week intervals.

The boats spraying unit consists of a barge 16 feet long, 6 feet wide, and 18 inches deep, carrying an American Marsh Pump delivering 200 gallons per minute of water and larvicide at 90 pounds pressure per square inch driven by a 19-horsepower Hercules engine directly connected. The larvicide is piped into the suction side of the pump from a 20-gallon tank where it meets and mixes with 200 gallon-per-minute supply of water taken from the river through a screened inlet in the side or bottom of the boat. The water and larvicide form a mechanical emulsion in passing through the pump. One part of larvicide is used with 40 to 60 parts of water. The mixture of larvicide and water is discharged through three 1¼-inch hoses terminating in three half-inch nozzles. All nozzles are supported by tripods, one anchored on each side and one in the bow. Each stream reaches a distance of 65 feet, spraying an area of 170 acres in eight hours.

The real monstrosities of our mosquito-fighting force are the Puddle Jumper, the Swamp Angel, the Dinosaur, and the Skeeter-Eater. The object of these large-tire four-wheel-drive units is to deliver the larvicide to the marsh over uneven ground, over muddy fields, across shallow ditches and into the marsh where spraying is accomplished quickly with a stream reaching 60 feet under 800 pounds of nozzle pressure.

The Skeeter-Eater, the newest unit, is a 1½-ton cab-over engine truck with a wheelbase of 109 inches, manufactured by the Marmon-Herrington Co., Inc., Indianapolis, Ind. It has a four-wheel drive and is equipped with 13½ x 24-inch tractor tires.

On this chassis is mounted a high-pressure orchard sprayer manufactured by the John Bean Manufacturing Company, Lansing, Mich. The pump delivers 20 gallons per minute at 800 pounds pressure per square inch. Other necessary features are: 100 feet of ¾-inch and 100 feet of ½-inch standard high-pressure hose; two Spray Master nozzles; a suction hose and strainer for filling the spray tank with marsh water.

A 200-gallon tank is mounted between the driver's seat and the pump. This tank is divided into three compartments: (1) a 55-gallon compartment for concentrated larvicide or oil, (2) a 100-gallon compartment for the diluted spray mixture, and (3) a 45-gallon compartment for tools and parts. The field-spray in the 100-gallon compartment is kept agitated by three two-blade propellers.

The Dinosaur has a four-wheel drive and large tires, 13½ x 36 inches. It carries a 35-gallon-per-minute pump and a 400-gallon tank.

Today in the Des Plaines Valley Mosquito Abatement District only two percent of the annual spraying is done with the knapsack sprayer.

DDT—A Dangerous Weapon

World War II has not held to the basic Gorgas formula of drainage and spraying. DDT, sprayed by airplanes, and the areosol gas-distribution of improved insecticides are the drastic methods of this war.

The ways of nature are exceedingly intricate, nothing can live to itself alone; hence, mosquito abatement should proceed with extreme caution lest damage be done to living things other than the mosquito. DDT has such potentialities. Its use for some years to come must be limited to the stamping out of the insect-borne epidemicals of human diseases.

In the future these new methods will be relied upon to stamp out mosquito-borne disease epidemics all over the world. DDT may even supplant petroleum oil as a larvicide for summer spraying activities; but, always economy will dictate the elimination of mosquito breeding places by drainage and filling, correction of stream pollution, and fish control. These are the basic permanent improvements which will pare down the problem of summer spraying of breeding places.

City Officials Eager for Modern Transportation

A.T.A. finds them taking initiative in post-war planning

By LESLIE WILLIAMS
City Planning Engineer
American Transit Association
New York 17, N. Y.

IN THE cities visited in a recent field trip to Kansas City, St. Louis, Indianapolis, Cincinnati, and Atlanta, I found evidence of a genuine desire for cooperation between city officials and transit management. *Generally speaking, public officials were more convinced of the place public transit will take in the post-war community than were the transit officials themselves.* City planners were emphatic about the essentiality of public transit and were seeking concrete data and reasons justifying the present pattern of transit routes or any changes that should be made.

My main observation was that the city official was foggy about transit's operational problems and the transit official in turn was quite unfamiliar with city planning procedures.

Some means must be devised whereby planners can be made more familiar with transit's operational procedures and the transit official shown more clearly how city planning and transit are interrelated. Perhaps a committee composed of city planners and transit officials could work out an outline of the "elements of transit planning."

Municipal officials, business leaders, and newspaper editors expressed the belief that transit companies are doing the best they can under present conditions and that as the opportunities present themselves, the companies will do all in their power to provide the best possible ride.

They Know More About Routes Than Vehicles

Public officials, however, do not put as much faith in the magic of new transit equipment as do transit officials. They are inclined to the belief that, although modern equipment is required, nevertheless transit's troubles stem from more fundamental causes, such as outmoded route layouts and the slow speed of the service. They feel that service is weak because in some cases the routes are too dense and in others too drawn out. Another thought is that transit routes should follow population growth and distribution more closely than has been the case in the past.

Transit officials, on the other hand, feel that their most serious problems are (1) post-war competition of the automobile; (2) street traffic congestion on their heaviest routes; (3) constantly increasing costs; (4) lack of public understanding of the problems of the post-war operation of a transit system.

Transit management was not worried about the interest that public officials will give to post-war transit, but rather fears that the general public will not understand its plight and need for correcting "inherited" mistakes of the past. Transit companies are somewhat hesitant to welcome city planning participation in transit route redesign. Some planners are coming to the conclusion that a transit system can be laid out only after a certain amount of original research, because the transit companies themselves do not have the required data. *Transit's plans for the post-war period as regards route layout are now being prepared in the city halls by public officials.*

Transit Planning in 5 Cities

In Kansas City, the city planner, traffic engineer, street commissioners, and members of the Kansas City Public Service Company are getting together periodically to study route changes and other improvements for the near future.

In St. Louis, the transit company is taking the initiative in drawing up an express service to be used on main thoroughfares unlike anything heretofore provided in that community. Also, a large bus parking area is being considered close to the downtown district to handle rush hour volumes.

In Indianapolis, the Bartholomew report was published and both the transit company and newspaper editors felt that this was "Hoosier foresight" in action by private enterprise. Everyone seems optimistic that many of the recommendations set forth in the report will be accepted and put into effect as time goes on.

In Cincinnati, transit plans are being studied in connection with expressway plans as part of the Interstate Highway System. Much attention is being given to the control of the indiscriminate and haphazard development of outlying areas that took place in pre-war days. The City Planning Commission and other public officials are constantly in touch with the representatives of the Cincinnati transit company, and the city should benefit considerably from this joint attention.

In Atlanta, transit management is taking the initiative in devising what might be termed a clear approach to its own transportation engineering problem. A member of the company has been assigned to give attention to the interrelationship of community planning and public transit, because it is firmly believed by this company that what is in the best interest of the long-term development of the Atlanta area, is in the best interest of the transit company itself.

Transit planning, as evolving today, is an entirely new and additional function that has not heretofore been comprehensively considered within transit companies. I realize that certain phases of comprehensive transit planning have been touched upon from time to time by different company officials, but no major comprehensive physical planning outlook has been considered as a major function of the company.

The city planner and the transit official must get together, outline common objectives, face the problem, set forth what pertinent data are required, and then work up the procedures for gathering and analyzing this data so that a practical community transit plan may be prepared.

Accidents Dictated Fifty More Motorcycle Officers for New Orleans

WE HAVE purchased 35 new Indian motorcycles and added fifty additional motorcycle men to the department. These motorcycles are not now radio equipped but will be as soon as materials are available.

Because of a heavy accident toll during the first part of the year we decided to add to our motorcycle force so that we could curb these accidents by a campaign of strict enforcement of all traffic violations.

GEORGE REYER
Superintendent of Police
New Orleans, La.

How Big a "Sugar Daddy" Should a Water Works Be?

THE 1944 Annual Report of the Water Department of the city of Long Beach, Calif., shows that since the discovery of oil on Water Department lands in 1921, contributions from that source to the general city government have been:

Oil and gas royalties	$11,495,677.45
Gas from Water Department land, taken "in kind" by the Gas Department	446,609.65
Total	$11,942,287.10

Entirely aside from the good luck which produced these exceptional revenues, the regular operations of the Water Department have resulted in substantial financial benefits to the city. These contributions from July 1, 1924, to June 30, 1944, have been:

Water served to other city departments	$ 602,574.75
Water served to social welfare cases beginning 1929	5,698.05
Water for thrift gardens beginning 1931	102,528.98
Fire hydrant installations	286,917.77
Labor and material furnished to other city departments	144,674.83
Funds expended for emergency work or unemployment relief 1930-32	97,542.80
Water revenue paid to Metropolitan Water District in lieu of taxes, November 1931 to June 1933	196,434.48
Water revenue paid into city general fund	518,055.62
Purchase of acreage used as extension of municipal airport	201,249.17
Total	$2,155,676.45

It is estimated also that the value of the stand-by fire protection furnished by the Water Department between June 30, 1915, and March 31, 1945, computed on the basis of $36 per hydrant per year, amounts to $2,500,000.

Aside, therefore, from the big windfall represented by the oil and gas profits, Long Beach's Water Department has aided the city's treasury in direct or indirect contributions to the extent of $4,655,676.45 over the years since 1915.*

Are such contributions in line with sound public policy? Many students of municipal government and public finance will agree with the Board of Water Commissioners of Long Beach which unofficially endorsed the viewpoint of its engineering staff regarding the proper place of a municipal utility in the city departments; it should pay other city departments for services received from them, be paid for services which it renders to other city departments, and pay into the general city funds an amount of money equivalent to the city taxes (including franchise tax) which it would pay if it were a private utility, and that, thereafter, its obligations are to its consumers and not to property owners as a group through reduced city tax rates.

On the other hand, there are many who believe that, with substantial expenditures for deferred public works and essential municipal services pending in most cities, it would be unwise to rely on higher tax rates on real estate improvements as a source of new municipal revenues; and that a reasonable diversion of the profits of municipally owned water works and of light and power plants is wise public policy. Such diversion, however, in the opinion of most of its advocates, should not take the form of inter-departmental subsidies, but should be clearly shown in the city's books, so that information as to costs or operating profits of each municipal department will be readily available to all interested citizens.

While the problem posed is not a new one, its timeliness is such that THE AMERICAN CITY would welcome expressions of opinion from its readers on the subject.

* It is worthy of note that the City of Long Beach had a city tax rate last year of $1.105 per hundred dollars of assessed valuation—one of the lowest in the country—due to the discovery of a second oil field under its harbor lands and a contribution of $975,000 from the Gas Department. The harbor lands produced about $3,300,000 for the city in 1943-44 and nearly $5,300,000 in 1944-45. Sufficient funds have already been accumulated from this source to retire all city general obligation bonds except those of the self-supporting Water and Gas Departments. A considerable part of all harbor oil revenue is earmarked for the development of the harbor, due to certain phraseology used in the deed of conveyance of tidelands from the State of California, but presumably there will be surplus revenues which will also go into the general funds of the city.

Illinois Cities and Villages Get Added Housing Aid and Powers

CHICAGO now has local funds sufficient to begin the purchase and clearance of large tracts in blighted areas, following approval on June 4 of a $5,000,000 city bond issue for slum clearance as well as recent action by the state legislature. The Illinois General Assembly last month appropriated $10,000,000 in state funds to be used for slum clearance. Inasmuch as the funds are to be allotted on the basis of population, it is expected that Chicago will receive approximately half the total.

The state appropriation carries with it the provision that funds are to be allocated by the Illinois State Housing Board either to local housing authorities or to land clearance commissions which may be set up in the various localities. Such commissions would have powers similar to housing authorities with the exception of local housing authorities' powers to build and operate housing projects.

In either case, the Chicago Housing Authority points out in its *News Bulletin* for July, the sites acquired with state funds could be used for public low rent housing or could be sold or leased to private corporations, insurance companies, or individuals presenting adequate plans for the construction of private housing.

The series of housing bills introduced earlier in this year's session of the Illinois General Assembly has been enacted into law, and Illinois now waits for building materials and labor to become available before launching a wide attack on slum clearance by both public and private agencies.

Passed and signed by the governor are bills which give Illinois cities and villages the power to acquire and clear blighted areas and permit insurance and building and loan associations to invest their funds in housing projects. Other laws remove personal liability from city officers responsible for the demolition of substandard structures, broaden local housing authority powers, and provide for the establishment of rural housing authorities of two or more counties.

A Housing Mission to Great Britain

Headed by Mrs. Samuel I. Rosenman, Chairman, four officers and directors of the National Committee on Housing, Inc. (512 Fifth Avenue, New York, N. Y.), sailed on the Queen Mary, on July 17, as a mission to confer with housing officials of the British Ministry of Health and leaders in housing construction, planning and financing in Great Britain. The other members of the mission are Webster B. Todd, President of the engineering firm of Todd & Brown and a director of the Metropolitan Life Insurance Company; H. Adams Ashforth, head of Albert B. Ashforth & Company Real Estate and a director of the Bank of New York; and Henry M. Propper, Executive Vice Chairman of the National Committee on Housing.

Merchants are saving now to remodel the facades of their stores shown here into the harmonious group shown below.

Business Men Start Community Planning

SOMETHING comprehensive and unusual in the way of post-war planning on a municipal scale has been undertaken in Franklin Square, N. Y., a suburban community of some 10,000 souls, at the instigation of local business men. C. William Green, public relations director of the Franklin Square National Bank and local chairman of the Committee for Economic Development, a business men's organization devoted to post-war planning, conceived the idea of asking the local merchants to save money for remodelling their stores and building a harmonious facade all along the main business street. He had an architect's drawing of the stores as they might look made and matched it with the actual photographs of the stores as they are now. The merchants responded to the graphically presented proposal with some enthusiasm. Twenty-five store owners and managers are taking part in the plan. The other nine stores in town are all of recent construction. Part of the drawing and the strip of photographs are reproduced at the top and bottom of this page.

Manufacturers were consulted during the working out of the plans. The Pittsburgh Plate Glass Co. agreed to make one job of all the glass work, and the matter of air-conditioning, in which all the merchants are interested, led to conferences with Carrier Corp. It was found that a fifteen-foot store front could be remodelled to fit into the plan for about $450 to $500. An option has been taken on a parking lot space to provide free parking space for shoppers. It is estimated that 1,600 cars will be taken care of with the aid of an attendant on busy days.

Public Works Are Also Planned

As the possibilities for cooperative, planned action unfolded, wider plans were made. Public works have been planned to supplement the merchant's projects. A new post office will be applied for and an elementary school and a village park are envisaged.

The enthusiasm of young people was elicited through the cooperation of Dr. A. T. Stannard, supervising principal of Sewanaka High School. An essay contest for high school students on post-war planning brought forth 850 entries. Prizes were provided by the bank.

A number of manufacturers met with the citizens of Franklin Square to discuss the needs and possibilities of the post-war period. Among them are: Wood Conversion Co.; Weyerhaeuser Corp.; The Celotex Corp.; the lumberyard owners of Nassau and Queens County (Franklin Square is in Nassau County and Queens adjoins it); Hoover Co.; Electrolux Corp.; Philco; Timken Automatic Oil Burner Corp.; Live Heat, Inc.; Radio Corp. of America, and the Pittsburgh Plate Glass Co. and Carrier Corp. who participated in the first project.

As a result of these meetings the bank has undertaken to keep records and savings on what it terms a "project register." The kind of improvement contemplated and estimated expenditure are marked down on the register and the savings applied to it as they come in. Even household appliances may be included in the project. More than $200,000 has already been set aside. The money is being invested by the bank in institutional war bonds.

Allocation of Admissions Tax to Municipalities Proposed

A PROPOSAL for meeting the urgent revenue needs of cities, villages, and other incorporated places is made by William Anderson, Head of the Department of Political Science of the University of Minnesota in the June 1945 issue of *Minnesota Municipalities*.

Dr. Anderson proposed that at the end of the war, when the national government revises its tax structure, the present admissions tax now levied and collected by the national government and used entirely for national purposes, be continued in force, collected as at present by the national government and at the present rates; that the proceeds, less the costs of administration, be allocated directly to the municipalities in which collected; and that the part that is collected outside the limits of any incorporated place shall be allocated to the county or township authority concerned, as each state may decide.

It is estimated that this proposal, if carried out, would bring into local treasuries sums, varying on a per capita basis for urban populations in the several states, from about two dollars per capita to perhaps five dollars or six dollars per capita in the places of highest urban concentration.

Airport Plans of Some of the Larger Cities

A TELEGRAPHIC survey recently made by the United States Conference of Mayors, Washington, D. C., obtained condensed reports of airport plans, needs, and costs for a number of the larger cities. The accompanying tabulation summarizes the data for 44 of these cities in 28 states and adds up to $138,000,000 worth of new airports and extensions. These cities expect the federal government to provide half the funds.

St. Paul, Seattle, and Tacoma go on record in this report as favoring the matching of federal funds for airport developments in their municipalities provided there is no loss of municipal sovereignty. These cities do not specify the estimated costs of their projects. The Mayor of Tulsa, Olney F. Flynn, however, reports $50,000 in funds for a private airport site and states that this sum could easily be doubled, but additional amount has not yet been voted.

DATA FROM FORTY-FOUR CITIES ON AIRPORTS AND EXTENSIONS NEEDED AND ESTIMATED COSTS

City	*Airport Needs*	*Cost*
Altoona, Pa.	New Airport	$ 100,000
Atlanta, Ga.	Enlargement, including new administration building	6,000,000
Baltimore, Md.	Expansion	6,000,000
Birmingham, Ala.	One Class IV and one Class II new airports	2,000,000
Cedar Rapids, Iowa		250,000
Chattanooga, Tenn.		2,000,000
Cincinnati, Ohio	Immediate post-war project	4,000,000
	Following ten years	4,000,000
Corpus Christi, Tex.	Development over 5-year period	5,000,000
Dallas, Tex.	New airport for non-scheduled flying	5,000,000
Davenport, Iowa	Class III airport	1,000,000
Denver, Colo.	Runways	600,000
	New administration building	400,000
Detroit, Mich.	Construction	10,000,000
Evansville, Ind.	Improvements	1,600,000
Fort Worth Tex.[1]	Air terminal to be completed by 1949	
Gary, Ind.[2]	Class III airport (jointly with the cities of Hammond and East Chicago)	1,200,000
Hazelton, Pa.[3]	New airport	
Houston, Tex.	Improvements	1,500,000
Huron, S. D.	Development of the W. W. Howes airport to a Class III designation	780,000
Kalamazoo, Mich.	Administration building	100,000
Kansas City, Mo.	Three Class I airports	184,000
Little Rock, Ark.	Expansion	2,000,000
Los Angeles, Calif.[4]	Extension and development of present airport	20,000,000
Louisville, Ky.	Buildings and development	2,500,000
Memphis, Tenn.	New airport	1,440,000
Miami, Fla.	One Class V Airport	2,250,000
	Two Class III Airports	750,000
	One seaplane terminal	250,000
New Orleans, La.	Eight additional airports of various classes	5,000,000
Newport News, Va.	New airport	1,500,000
Ogden, Utah	New administration building and runways	382,000
Oklahoma City, Okla.	Expansion	1,000,000
Phoenix, Ariz.	Enlargement of present airport	1,500,000
Portland, Ore.	Enlargement of present airport	1,500,000
Reading, Pa.	Commercial development of present airport	500,000
Richmond, Va.	Enlargement	1,000,000
Rockford, Ill.	Development and expansion	1,170,000
St. Louis, Mo.	Several airports	14,000,000
San Antonio, Tex.	Improvements	1,500,000
San Francisco, Calif.	Reconstruction present airport	20,000,000
Shreveport, La.	Development and expansion	2,500,000
Spartanburg, S. C.	Repair and resurfacing of present airport	200,000
Terre Haute, Ind.	Improvements in completion of Hulman Field, the new airport	300,000
Waterbury, Conn.	Class III regional airport on Class IV site	3,700,000
Winston-Salem, N. C.	Development	40,000
Worcester, Mass.[5]	Development	2,000,000
Yankton, S. D.	Development	200,000

[1] Fort Worth has available funds of $267,000 and contemplates bond issue of $2,400,000. Fifty-fifty matching basis for grading, runway construction, and field lighting.

[2] Gary has a cash appropriation of $165,000 banked for this purpose.

[3] Hazelton has already spent $60,000 for purchasing and clearing its site.

[4] Los Angeles has $2,110,922 left from a previous bond issue. Additional issue of $12,500,000 approved by the voters in May.

[5] Worcester has spent and contracted for $743,000 to date and will provide up to $257,000 balance to match federal appropriation.

Lewiston, Idaho Is Ready for Air Service

By W. P. HUGHES
City Engineer, Lewiston, Idaho

LEWISTON'S million dollar airport involved removal of orchards, houses, farms, pipe lines, and 850,000 cubic yards of excavation, more than 150,000 of which was solid rock. It is a sterling example of what community spirit and effort can do.

The original tract contained 525 acres of farming land, and, when the port was expanded, we needed an additional 115 acres, most of which was in an irrigation district consisting of cherry orchards and modern city homes. The acquisition of the property would have been quite a financial strain on the community. The city therefore secured the cooperation of the county, and acquired farm land at $50 per acre and orchard land, at from $200 to $850 per acre for a total of $68,794.46.

The now completed project represents cooperation of the WPA, CAA, and City of Lewiston, and Nez Perce County. The original plan was for a Class III port, with 4,350-foot runways. The total financial outlay, as set up in agreement between the City-County and Civil Aeronautics Administration, was for an expenditure of $554,827, $134,523 of which was to be provided by the sponsor. On February 1, 1942, however, the President ordered all WPA projects liquidated. After removal of 100,000 cubic yards of solid rock, 600,000 cubic yards of dirt, and installation of three miles of storm drain, with 90 percent of paving material in stockpiles, the work was stopped, about 80 percent complete. At that time the sponsors had spent around $140,000, and the WPA over $400,000, or a total of $540,000.

No time was lost in entering into negotiations with the CAA to arrange for its completion. The regional office at Seattle approved our request for removal of the contract. Later Washington gave us $241,000 for the work.

At this time the Navy became interested and requested the CAA to change and enlarge the design, and it was decided to increase the length of the runways to 5,200 feet, with a 5,000 x 150-foot paving strip in the center of the two 500-foot wide runways. There

are 9,000 feet of taxiway, graded 100 feet wide with a 50-foot paving strip. This required additional funds amounting to $244,000, or a total of $484,000, all of which was put up by CAA. The Northwestern Engineering Company of Rapid City, S. D., was the lowest of ·iten bidders—$477,199.80.

The finished airport was dedicated in July 1944. Since then several air lines have made application to the CAB for use of the port. The applicants include: The Empire Airways of Lewiston, United Air Lines, Western Air Lines, Southwest Air Lines.

Total Cost to All Participants in Project

CAA	$ 477,199.80
WPA	410,000.00
Sponsors	134,000.00
	$1,021,199.80

A Sketch of Lewiston's Million Dollar Airport

Improvements Which Facilitate Central Station Steam Distribution Over Wide Areas

By S. E. DOCKSTADER
Washington, D. C.

IT IS AN astonishing fact that so small a percentage of our total population enjoy the comforts and advantages of central station steam supply. Aside from the pecuniary and economic advantage, millions of individuals should be enjoying fuller, happier, more wholesome and useful lives as the result of this logical and practical service which is available. Though there are already some very extensive practices of steam distribution from centralized steam generating plants, most of them originated more from necessity than from an earnest effort to improve heating practice by using the latest available advancements made in that field.

Improved Efficiency in Boiler Operations

Much has been written about the engineering developments toward improved efficiency in boiler operations at large steam generating stations. The progress of these developments has been great, and we can rightfully expect it to be an added inducement for the expansion of the business of steam heating from a centralized heating plant. During the past fifteen years machinery for trenching, provisions for ready-mix concrete, welding of joints in pipe lines, perfection of several types of conduit with more efficient insulation, and numerous other details in the sequence of operations necessary in the construction of underground steam lines, have made progress in favor of this type of utility. During the next fifteen years it is expected that steam will make sound headway in acceptance like that of water, sewer gas, and electric services.

Plans Are Ready

Surveys, designs, and financial setups have been presented by responsible engineers with results which would convince the most skeptical of the practicability from the standpoint of investment returns. When we consider the psychological advantages resulting from this sort of service together with its other advantages, we can fully realize why the future demands for "Steam—Door Delivery" may reach compelling proportions.

The distribution of steam over wide areas, generally recommended and desired in underground pipe conduits, presents the major problem in "Door Delivery." From past experience we at least have learned "How not to do it," and that is a great step in any venture.

The distribution system of a centralized district heating layout is probably as vital, if not the most vital part of the entire project, as far as effecting the success of operation. When one realizes the nature of the work involved in the installation of steam distributing pipe lines, he will be able to visualize the importance of skillful construction of such a project. Under normal conditions the useful life of a steam line is expected to be from thirty to fifty years. Much depends on the design, and the careful execution of the installation. A first class design poorly installed may be the reason for wasteful operation, and the cause of early deterioration. One may wish to construct underground conduits through which pipes are laid in the conduit with just enough room for the pipes only, or, in the case of some very large cities, tunnel construction may be desirable. Routes to be followed in laying these lines parallel those already laid by other utilities.

Some one asked me how anyone would go about deciding a favorable district for a central heating system. My answer was, "Go to the roof of your home, whether it be hotel, apartment house, or a single residence; look at the surrounding territory, and picture in your mind the proper location for a suitable boiler plant from which a lot of pipe lines could be laid to reach the customers waiting for 'Door Delivery' of steam for the next heating season." Nine out of ten times you would be right in the conclusion that this visualized area offered a splendid opportunity for a good heating utility.

With all the proof available as to the success and convenience of such a system who today is so old-fashioned as not to enthusiastically welcome the opportunity for the comforts of delivered steam service to his home or place of business?

Development of Sewage Treatment

By CHARLES A. EMERSON
Havens & Emerson
Consulting Engineers
New York and Cleveland

The Lawrence Experiment Station where in 1889 engineers, chemists, and biologists collaborated for the first time to promote public health.

BEFORE the turn of the century stream conditions were fast becoming intolerable in this country, particularly in the southern New England states. Here many textile mills and tanneries were emptying their wastes into the few small streams of that region. Typhoid fever was prevalent, but, though there were official reports of the cause of epidemics, there were no American treatises available on water pollution or sewage treatment.

Happily, however, the Massachusetts Legislature in 1886 enacted a law placing the control of its inland waters under the jurisdiction of the State Board of Health and appropriated a sum of money for experimentation to determine the best methods of purification of drainage and sewage. Accordingly the Lawrence Experiment Station was set up with chemical and bacteriological laboratories and 20 filters. Here in 1887, engineers, chemists, and biologists were for perhaps the first time given the opportunity to collaborate under expert technical leadership to promote public health. The value of coordinating their work was demonstrated not only in providing answers to the sewage treatment problems of that day, but also in providing reliable data on which to base designs of sewage treatment plants.

Experiments conducted here during the next twenty years did more than most other studies to place sewage treatment on a sound scientific basis. It was here that the biological nature of filtration was established, proving this process to be more than a mechanical one.

Milestones

Intermittent Sand Filtration—The demonstration at Lawrence that controlled application of sewage in intermittent doses to prepared, underdrained beds of sand would accomplish the continuous purification of municipal sewage was convincing. As a result, first Framingham and then Brockton, Mass., installed sand filters, and within a few years there were thirty such installations in New England and many others scattered throughout the United States.

Chemical Precipitation — Though this method of treatment, which is even yet considered highly specialized, was commonly practiced during the last quarter of the nineteenth century in England, there were only two plants using it in the United States, one at Worcester and the other at Providence, R. I. These two plants were the first to employ technically trained plant operators and were operated so scientifically that data collected by those early operators are still of value.

Preliminary Treatment—In early filter plants only rack screens and small grit chambers preceded the filtering operation which meant that frequent cleaning of the filters was necessary. In 1896 the septic tank for the control of anaerobic putrefaction of sewage solids was developed. Though its operation was frequently unsatisfactory the process had merit and was widely accepted. However, patents on this tank led American engineers to develop other methods of treatment. One was separate sludge digestion. The first of the separate sludge digestion tanks went into operation in Baltimore in 1912. Several other developments followed each other in rapid succession; the Hampton or Travis tank, the Imhoff tank, and finally the single story settling tank.

Trickling Filters—The original idea of coarse grained filter media may be attributed to the Lawrence Station and the establishment of the importance of trickling filter as well, but for the early development of this means of treatment we must credit British investigators. Standards for these units and their operation were studied in a testing station at Columbus, Ohio, and at the Sewage Testing Station of the Massachusetts Institute of Technology. In 1908 three municipal trickling filter plants went into operation at Reading and Washington, Pa., and at Columbus, Ohio, and in 1912 Baltimore installed a large plant of this type. Other installations were made with increasing rapidity until in 1940 there were 1,600 in operation, which is 58 percent of all the plants providing secondary treatment in this country.

Recent new developments and modifications of old ones abound. The birthplace of modern sewage treatment was England, but much of the early development of this art was due to the unusual technical skill, foresight, and keen judgment of a mere handful of American chemists, biologists, and engineers working together for the promotion of public health.

From an address delivered before the New York State Sewage Works meeting held recently in New York.

Taper Off of Priorities Begins

Details of a revised priorities system leading to the discontinuance of priorities assistance for "virtually everything except military requirements" have been announced by J. A. Krug, Chairman of the War Production Board. The new priorities system, which began to come into effect July 1, will not come into full operation until December 31, 1945, to "give business an opportunity to adjust its operations to the new system."

IOWA Anchors the Soil!

Seeding of Rights-Of-Way Urged to Protect Roads and Streets

A Better Highway Care program is under way in Iowa to Anchor The Soil on the state's roadsides! Proper seeding and sodding to end a host of maintenance headaches is urged by the Highway Commission, Soil Conservation Service and State College.

Officials list the following troubles which can be remedied:

1. **Gullying of ditches on hillsides, cuts and fills.**
2. **Filling of ditches by soil which has washed from the roadway watershed or from adjoining farmland.**
3. **Filling of culverts and other structures with silt.**
4. **Undermining and undercutting of structures.**
5. **Infestation of weeds and other similar problems.**

Here is a program worth fostering and encouraging in your community. Your local County Agricultural Agent and Soil Conservation office are in a position to recommend proper methods for establishing a turf . . . and are most cooperative. You will find it pays in many ways to Anchor The Soil on your rights-of-way!

ALLIS-CHALMERS
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

(Above) **GRADE . . . THEN SEED. Safer, easier riding, more attractive roads and streets! You can have them at less cost by grading with the fast-working, powerful A-D Motor Grader and follow with a thorough seeding of shoulders, ditches, slopes.**

• • •

(Left) **NEAT AS YOUR FRONT YARD. That's the best compliment a taxpayer can give you on the condition of your rights-of-way. Allis-Chalmers Model "B" Mower cuts back slopes up to 60° above horizontal, mows ditches and shoulder slopes to 45° below.**

Conventions—When and Where

*Aug. 31-Sept. 1—Richfield, Utah
MUNICIPAL LEAGUE OF UTAH. Annual Convention. Exec. Sec., Miss Lyla Ray, Public Safety Bldg., Salt Lake City, Utah.

Sept. 11—Boston, Mass.
NEW ENGLAND WATER WORKS ASSOCIATION. Annual Meeting. (Hotel Statler) Sec., Frank J. Gifford, 615 Statler Bldg., Boston, Mass.

Sept. 12—Springfield, Mass.
NEW ENGLAND SEWAGE WORKS ASSOCIATION. Annual Meeting. (Hotel Kimball) Sec.-Treas., LeRoy W. Van Kleeck, c/o State Department of Health, State Office Bldg., Hartford, Conn.

Sept. 14—Pittsburgh, Pa.
AMERICAN WATER WORKS ASSOCIATION—WESTERN PENNSYLVANIA SECTION. Local Water Works Meeting in Place of Annual Meeting. (Hotel Roosevelt) Sec., E. P. Johnson, 418 Flannery Bldg., Section 13, Pittsburgh, Pa.

Sept. 17-18—Philadelphia, Pa.
INSTITUTE OF TRAFFIC ENGINEERS. Annual Business Meeting. (Hotel Bellevue-Stratford) Sec.-Treas., W. Graham Cole, 60 John St., New York 7, N. Y.

Sept. 17-20—Rock Island, Ill.
BUILDING OFFICIALS' CONFERENCE OF AMERICA. Annual Meeting. Sec.-Treas., Arthur N. Rutherford, Building Inspector, West Hartford, Conn.

†Sept. 19-20—Grand Rapids, Mich.
AMERICAN WATER WORKS ASSOCIATION—MICHIGAN SECTION. Annual Meeting. (Hotel Pantlind) Acting Sec.-Treas., Raymond J. Faust, Division of Water Supply, Bureau of Engineering, State Department of Health, Lansing 4, Mich.

Sept. 20-21—Mammoth Cave, Ky.
KENTUCKY MUNICIPAL LEAGUE. Annual Meeting. (Mammoth Cave Hotel) Exec., Sec., Carl B. Wachs, c/o University of Kentucky, Lexington, Ky.

Sept. 20-21—Rochester, N. Y.
MUNICIPAL ELECTRIC UTILITIES ASSOCIATION OF NEW YORK STATE. Annual Conference. (Hotel Sheraton) Sec., T. J. McKee, 200-212 East Third St., Jamestown, N. Y.

*Sept. 21—Denver, Colo.
AMERICAN WATER WORKS ASSOCIATION—ROCKY MOUNTAIN SECTION. Annual Conference. (Hotel Shirley Savoy) Sec., O. J. Ripple, Supt. of Filtration—RFD No. 2, Littleton, Colo.

*Oct. 3-4—Wausau, Wis.
WISCONSIN CHIEFS OF POLICE ASSOCIATION. Annual Conference. (Hotel Wausau) Sec., R. K. McCarty, Kaukauna, Wis.

*Oct. 8—McPherson, Kan.
KANSAS ASSOCIATION OF MUNICIPAL UTILITIES. Business Meeting in place of convention. Sec.-Treas., Edgar P. Showalter, Board of Public Utilities, Kansas City 16, Kan.

†Oct. 8-10—Pittsburgh, Pa.
NATIONAL TAX ASSOCIATION. Annual Conference. (Hotel William Penn) Raymond E. Manning, Library of Congress, Washington, D. C.

*Oct. 16-17—Shreveport, La.
AMERICAN WATER WORKS ASSOCIATION—SOUTHWEST SECTION. Wartime Conference. (Hotel Washington-Youree) Sec., L. A. Jackson, Mgr. Little Rock Water Works, Little Rock, Ark.

†Oct. 22-23—Pittsburgh, Pa.
ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA. Annual Water Conference. (Hotel William Penn) Chairman, H. M. Olson, Hotel William Penn, Pittsburgh, Pa.

*Oct. 23—Los Angeles, Calif.
AMERICAN WATER WORKS ASSOCIATION—CALIFORNIA SECTION. Annual Meeting. (Hotel Biltmore) Sec., Blair I. Burnson, P. O. Box 720, Oakland 4, Calif.

*Oct. 25—Oakland, Calif.
AMERICAN WATER WORKS ASSOCIATION.—CALIFORNIA SECTION. Annual Meeting. (Hotel Claremont) Sec., Blair I. Burnson, P. O. Box 720, Oakland 4, Calif.

*Oct. 25-26—Windsor, Ont.
CANADIAN INSTITUTE OF SEWAGE AND SANITATION. Annual Convention. (Hotel Prince Edward) Sec.-Treas., Dr. A. E. Berry, Dept. of Health, Parliament Bldg., Toronto, Ont.

Oct. 30-31—Milwaukee, Wis.
AMERICAN WATER WORKS ASSOCIATION—WISCONSIN SECTION. Meeting for Communities Having Surface Water Supplies. (Hotel Pfister) Sec., L. A. Smith, Milwaukee, Wis.

†Nov. 8-9—Roanoke, Va.
AMERICAN WATER WORKS ASSOCIATION—VIRGINIA SECTION. Annual Conference. (Hotel Roanoke) Sec., W. H. Shewbridge, State Department of Health, Richmond 22, Va.

*Nov. 8-10—Atlantic City, N. J.
AMERICAN WATER WORKS ASSOCIATION—NEW JERSEY SECTION. Fall Meeting. (Hotel Madison) Sec., C. B. Tygert, Box 178, Newark, N. J.

*Nov. 13-15—Milwaukee, Wis.
AMERICAN WATER WORKS ASSOCIATION—WISCONSIN SECTION. Meeting for Communities with Deep Well Water Supplies. (Hotel Pfister) Sec., L. A. Smith, Madison, Wis.

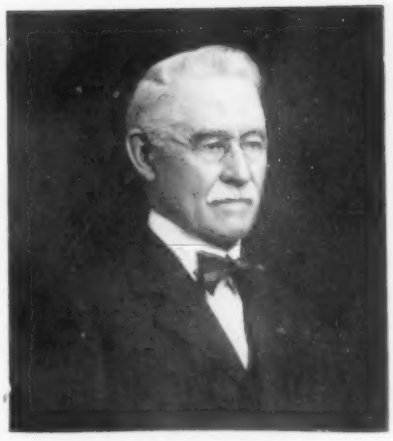
*Nov. 25-27—New York, N. Y.
AMERICAN SOCIETY OF MECHANICAL ENGINEERS. Local Meeting. (Hotel Pennsylvania) Exec. Asst. Sec., Ernest Hartford, 29 W. 39th St., New York, N. Y.

* First appearance on this page.
† If government restrictions permit.

The Municipal Bond Market

Some sales of new issues as reported in July issues of *The Bond Buyer*

Amount	Borrower and Purpose	Rate (%)	Term (Years)	Basis (%)
$ 149,000	St. Paul, Minn., Public Welfare	.60	2 Avg.	.57
480,000	Omaha, Neb., Sports Stadium	3.0	4	.58367
500,000	Worcester, Mass., Airport	.75	1-10 Ser.	.62
1,000,000	Boston, Mass., Public Ways Const.	1.0	1-10 Ser.	1.2354
1,260,000	Pittsburgh, Pa., General Public Improvement	1.0	1-20 Ser.	.938
1,150,000	Bartlesville, Okla., Water Works	1.10	13.83 Avg.	1.099
100,000	Bryan, Ohio, Electric Light and Power Mortgage Revenue	1.10	5.25/6.83 O.-A.	1.045
110,000	Portsmouth, Ohio, Flood Defense	1.25	1-11 Ser.	1.14
1,000,000	—Houston, Texas, Permanent Paving	1.25	1-20 Ser.	1.2354
175,000	North Providence, R. I., Funding and Improvement	1.50	12.83 Avg.	1.48
992,000	New York City Housing Authority, N. Y., Refunding	1.60	5/36.75 O.-A. Prem.	1.6129
530,000	Lockland, Ohio, First Mortgage Water Works Revenue	1.75	9.33/17.83 O.-A. Prem.	1.658
250,000	Los Angeles Co., Cal., Hawthorne Sch. Dist.	1.75	10.66 Avg.	1.73
157,000	Laredo, Texas, Refunding	2.75	10.75 Avg.	2.33
275,000	Cincinnati, Ohio, Street Improvement	2.50	10.33 Avg.	2.50
149,000	Borger, Texas, Refunding	2.75	6.83/11.33 O.-A.	2.636



98 Years Young

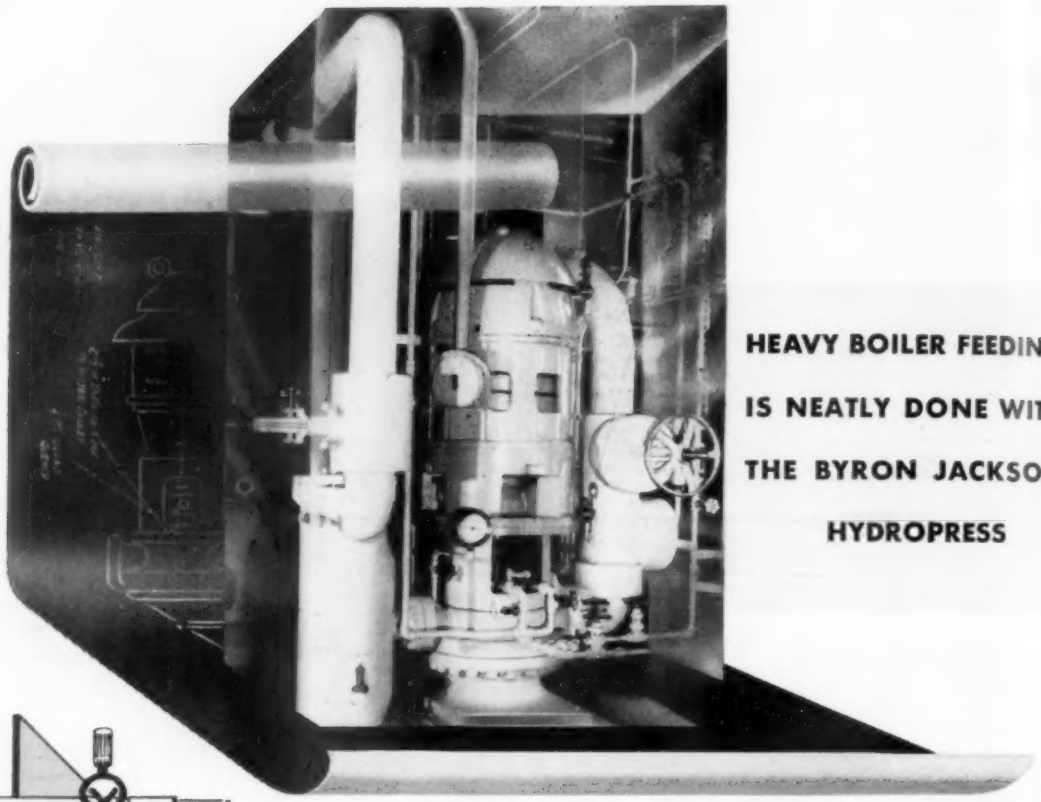
EDWIN A. FISHER, City Engineer Emeritus of Rochester, N. Y., celebrated his 98th birthday on July 17 by working as usual at his desk in City Hall.

Ever since 1871 Mr. Fisher has been in civic engineering activities. Until 1888 he specialized in railroad location and construction work. This was followed by five years of miscellaneous public works, water supplies, flood protection, river bridges, etc., for the town of Westfield and Hampden County, Mass. His services to the city of Rochester began in 1893 as principal assistant on the additional water supply. In 1896 he was appointed City Engineer and retained this position under different municipal administrations until the end of 1913, when he was promoted to full time Consulting Engineer to the city of Rochester. From this position Mr. Fisher was compelled to retire by the New York State Retirement Act on December 31, 1926. Since then he has furnished voluntary aid to various officials of Rochester, and for that purpose has been in the office of the City Engineer from 9:00 A.M. until about 2:30 P.M. for about five days a week, except for the lunch hour.

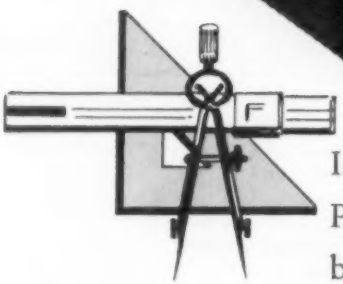
During his service as Rochester's Consulting Engineer, Mr. Fisher gave special attention to city planning problems, and served as engineer and secretary of the City Planning Board, 1917-23. He is a past president and honorary member of the American Public Works Association, and is also an honorary member of the Rochester Engineering Society, American Society of Civic Engineers, and American Institute of Planners.

THE AMERICAN CITY hopes that two years hence this magazine can record Mr. Fisher's continued good health and useful activity at the age of 100.

IN 2 BY 5 BY 8



HEAVY BOILER FEEDING IS NEATLY DONE WITH THE BYRON JACKSON HYDROPRESS



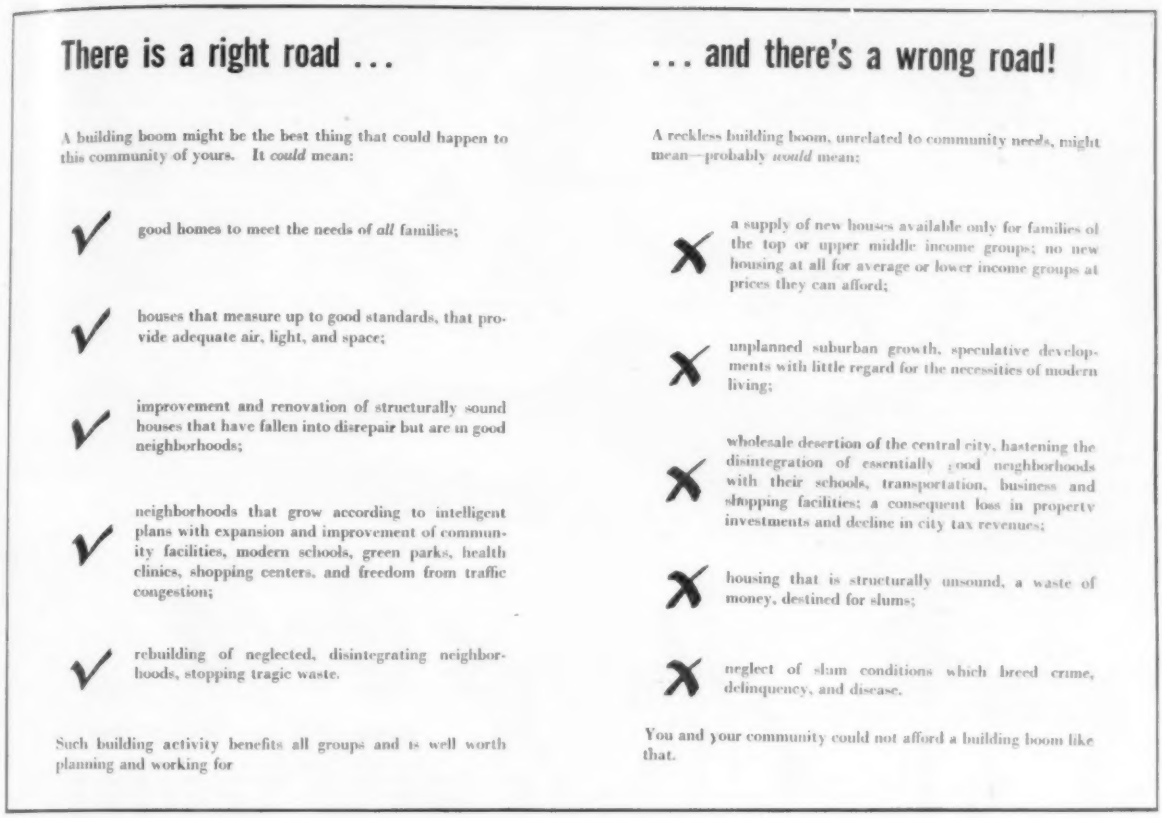
Installed in 1940—this 15″ 16-stage Hydropress Boiler Feed Pump, with its 150 hp, 2300 volt, 3600 rpm motor, requires but ten square feet of floor space, yet provides 100,000# per hour at 850 psi.

Particularly advantageous where the npsh is limited, the Hydropress is but one of three types of pumps especially developed by Byron Jackson for Boiler Feed Service.

Capacity and pressure conditions can be met and limitations of available floor space and npsh can be overcome. Let's discuss your particular problem.

CENTRIFUGAL AND TURBINE PUMPS
SUBMERSIBLE MOTORS

BYRON JACKSON CO.
Houston • LOS ANGELES • New York



There is a right road . . .

A building boom might be the best thing that could happen to this community of yours. It *could* mean:

✓ good homes to meet the needs of *all* families;

✓ houses that measure up to good standards, that provide adequate air, light, and space;

✓ improvement and renovation of structurally sound houses that have fallen into disrepair but are in good neighborhoods;

✓ neighborhoods that grow according to intelligent plans with expansion and improvement of community facilities, modern schools, green parks, health clinics, shopping centers, and freedom from traffic congestion;

✓ rebuilding of neglected, disintegrating neighborhoods, stopping tragic waste.

Such building activity benefits all groups and is well worth planning and working for

. . . and there's a wrong road!

A reckless building boom, unrelated to community needs, might mean—probably *would* mean:

✗ a supply of new houses available only for families of the top or upper middle income groups; no new housing at all for average or lower income groups at prices they can afford;

✗ unplanned suburban growth, speculative developments with little regard for the necessities of modern living;

✗ wholesale desertion of the central city, hastening the disintegration of essentially good neighborhoods with their schools, transportation, business and shopping facilities; a consequent loss in property investments and decline in city tax revenues;

✗ housing that is structurally unsound, a waste of money, destined for slums;

✗ neglect of slum conditions which breed crime, delinquency, and disease.

You and your community could not afford a building boom like that.

Two pages from "Housing: A Community Job"

Your Community Is What You Make It

HOW will your community be affected by the expanding building activity which the post-war years are certain to bring?

That a satisfactory answer to this question will depend largely on the efforts of both official and unofficial groups concerned with housing and planning is the theme of "Housing: A Community Job," a new pamphlet* of the National Housing Agency, two pages of which are reproduced above.

"The goal of a good home in a good neighborhood for every American family is not too high for a democracy such as ours," says the pamphlet.

The pamphlet, which is addressed especially to citizens' organizations, suggests that such groups urge an official local agency to make an inventory of housing conditions and needs, and that the city's planning agency or the community officials formulate a comprehensive plan for the community.

"Such a plan, of course, would take into account the present and probable future locations of industries, transportation, public utilities, schools, recreation areas, and other community facilities.

"Slum clearance and urban redevelopment can be effective only when they are part of an over-all plan covering in addition to housing, such local problems as transportation, industrial development, recreation, education, health, and other community facilities. Property values decline and neighborhoods deteriorate when over-all planning for proper use of land is neglected."

The importance of creating a community-wide consciousness of housing is stressed:

"Such a program of public education can include meetings on housing, open to the public; radio programs; public forums; quiz programs; contests. You may be able to provide qualified speakers for local meetings, prepare and distribute simple pamphlets or posters. Ask your local business men to cooperate with you in publicizing and dramatizing the housing survey and pointing up the need for community-wide action."

The pamphlet concludes with a discussion of suggestions for meeting the immediate problem of homes for returning veterans and service families.

* See page 133 of this issue.

Award for Distinguished Civic Service

COMMUNITIES for centuries have been indebted to distinguished, public-serving private citizens for much of their progress. But adequate recognition of such service is none too common. Last month it was decided that Toledo, Ohio, is to be added to the small list of municipalities that annually pay tribute to the citizen who makes the greatest unselfish contribution to its progress as a community each year.

The Toledo Commission of Publicity and Efficiency has resolved to make an annual award on or about the first of September to the private citizen who has rendered to Toledo the greatest public service in the last twelve months, and it resolved further that fitting ceremonies be arranged for the occasion of the presentation.

The award will be made as a token to be accepted from a Toledo citizen by the Commission each year, and to be presented as the award of that contributor, and named after its donor. Announcement of the donor for 1945, who is to offer a suitable medal, plaque, or other token, will be made shortly.

Load Packer. Compresses garbage and rubbish. Greater loads . . . fewer trucks and men required.

Always Good

NOW BETTER THAN EVER

GAR WOOD SPECIAL MUNICIPAL EQUIPMENT

Three section Hydraulic Repair Tower equipped with extension platform to facilitate work over parked cars.

For nearly three decades Gar Wood engineering and inventive genius plus Gar Wood quality in manufacture gave public works everywhere the world's finest, most efficient municipal equipment.

Then came the period when Gar Wood equipment was made for exclusive military use. Notable mechanical improvements, and even greater ruggedness, were built into these units giving them a new degree of efficiency.

Now, with civilian production about to be resumed, Gar Wood will build still better municipal equipment . . . with greater values, longer life and maximum economy.

BUY MORE BONDS . . AND KEEP 'EM

Street Flushers and Sprinklers . . . tanks for all liquids.

Tree Moving Crane picks up, transports and resets trees.

Cam and Roller, also Direct Lift, Hydraulic Hoists and Bodies

Winches and Cranes for handling pipe etc.

GAR WOOD INDUSTRIES, INC., Detroit 11, Mich.

BRANCHES AND DISTRIBUTORS IN ALL PRINCIPAL CITIES

WORLD'S LARGEST MANUFACTURERS OF TRUCK AND TRAILER EQUIPMENT

HOISTS AND BODIES • WINCHES AND CRANES • TANKS • ROAD MACHINERY • HEATING EQUIPMENT • MOTOR BOATS

What Service Men and Women Favor in War Memorials

By MICHAEL R. HANNA
General Manager WHCU, Columbia Broadcasting System, Ithaca, N. Y.

EVERY town of every size is now thinking of war memorials and has been for months. This is what has been happening in Ithaca, N. Y. Talk began to crop up in community meetings, at a Council of Social Agencies, at a School Board meeting, at a YMCA gathering, in a restaurant, over a bar, at private dinner parties. "What are we going to do about a war memorial?", "No more stone cannons!", "How about a municipal park?", "How about a city swimming pool?", "We want a public bowling alley", "We think a nice flower garden, in memoriam, would be the thing," "We need better comfort stations," "We'd like a granite pillar," "How about a city community center?", "Let's have no more stone statues, let's have no more monuments—let's build a LIVING MEMORIAL."

Community Leaders Confer

So after several months of scattered talk, several of the city's forward looking leaders sat down together and talked it over. And they decided wheels should be set in motion so that a lot of different organization and different individuals wouldn't go off building monuments, and swimming pools, and comfort stations in the name of "a memorial." The Mayor, as chairman of the local war council, named a committee and asked its members to make a survey. They did; they very quietly asked some 100 people of the town (an attempted cross-section) just what they thought a living memorial should be, how it should be paid for, and when it should be planned. Opinion varied and the committee decided that the first step was not a hometown survey after all, but was to ask the men and women whose services any memorial would be intended to commemorate.

Service Men Appealed To

So through the pages of the *Service Men's Weekly News Letter*, Ithaca asked the service men and women what they thought a living memorial should be. This weekly was used as the best medium for reaching men and women in service because it is mailed regularly to some 3,500 of them at home and overseas. The *News Letter*, originated and sponsored by Station WHCU, and edited by members of the WHCU staff, carried two stories asking the men what they thought of a memorial. Since there had been, in the civilian eyes, some question as to the advisability of starting a memorial while the war was still going on, one of the main questions asked was, when! Should the community wait until the fighting men were all home again to build a memorial?

"Build a Community Center"

Hundreds of letters came back in answer. And with very few exceptions, they pointed one way. No more stone statues, no more granite pillars, no more parks with flowers. What they all wanted was something for the use of all the people of the town and county, the children, the young people, and the older folks. Build a community center, they said—a real one which will answer all the needs of our town. A community center which will have a swimming pool, a ball park, an auditorium, a skating rink. Start it now and build it to last, build it for the future and build it for our sons and daughters, for their better health, for their better sportsmanship, for their better community living. And almost every letter said, Start now! Don't wait until the war is over. The men at the front are fighting for just such things as a community which takes hold and works together to provide something useful and worthwhile for those who come back and their families.

So overwhelming was this sort of mail from the fighting men and women themselves that the Mayor's committee now has something very definite to go on—a directive from the front lines. *Now* that they have this directive they are starting a community survey. In the face of the directiye from the service men themselves there is little doubt that a living memorial will be built and that it will be a combined community project.

Race Riots Aren't Necessary

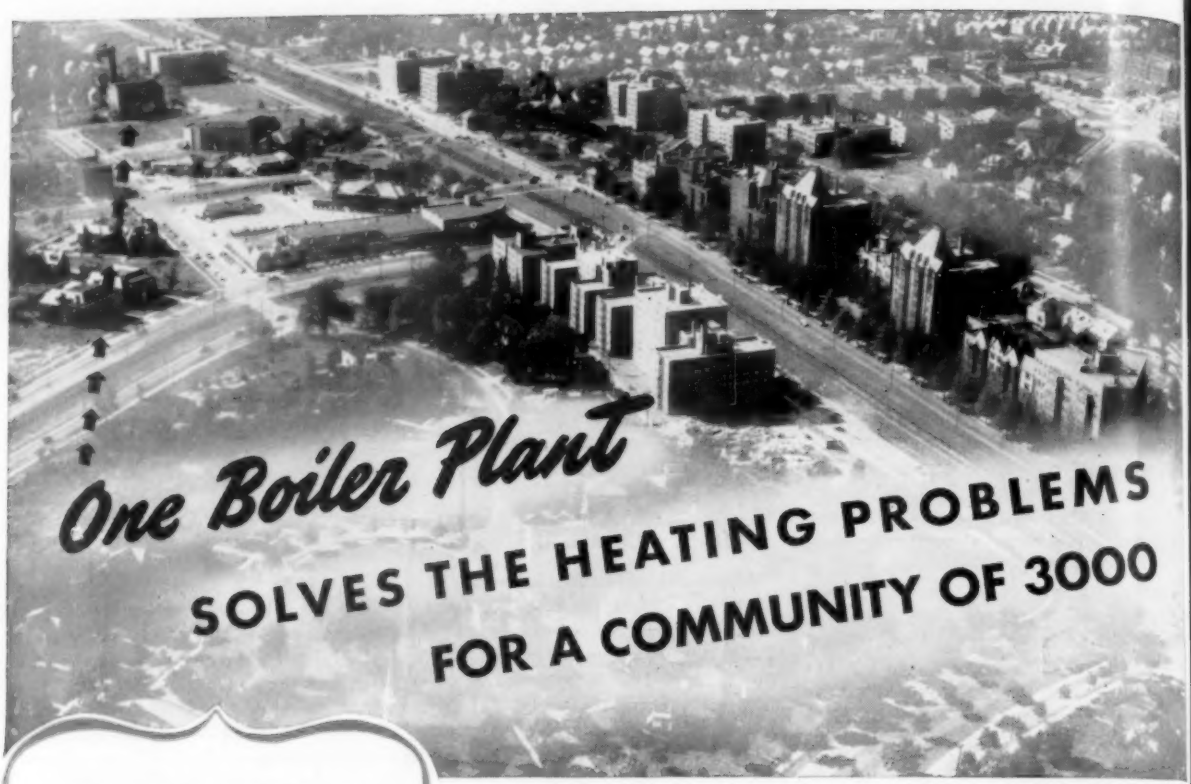
IN AN emergency move to help cities and towns prevent race riots, the Public Affairs Committee in cooperation with the American Council On Race Relations issued, on July 31, "Race Riots Aren't Necessary,"* with a program of action on what to do if race riots threaten.

The pamphlet tells how to spot danger signals preceding rioting and recommends specific emergency action that the community, individuals, organizations, churches, schools, and community groups should take. Plans for long-term programs to foster better intergroup relations are also outlined.

More than 35 national organizations

* Pamphlet No. 107 in the series of popular factual, 10-cent pamphlets issued by the Public Affairs Committee, nonprofit educational organization at 30 Rockefeller Plaza, New York 20, N. Y.

IF A RACE RIOT LOOMS
DO THESE THINGS!
MAYOR
WORK OUT PROGRAMS WITH SCHOOLS
SEE THAT MAYOR KNOWS HOW TO BRING MILITIA OR ARMY
PREPARE CONSTRUCTIVE RADIO PROGRAMS
PLAN NEWSPAPER COVERAGE
GET COOPERATION OF TRANSPORT COMPANIES
ENLIST THE HELP OF CLERGYMEN
MOBILIZE YOUTH ORGANIZATIONS
MAKE USE OF CIVIC AND SERVICE CLUBS
CONSULT MANAGEMENT AND LABOR LEADERS
OBTAIN AID OF VETERANS' GROUPS



One Boiler Plant SOLVES THE HEATING PROBLEMS FOR A COMMUNITY OF 3000

BUILDINGS SERVED BY CENTRAL HEATING PLANT AT SHAKER SQUARE

- Apartments and multiple dwellings—housing approximately 700 families.
- Branch bank.
- Theatre seating 1,500.
- Tavern restaurant and Inn.
- Buildings containing 45 stores and 30 office suites.
- Large restaurant.
- Automobile Service Stations.

The Heating Plant is modern and fully automatic—requiring a crew of only 5 men. During the last complete heating season it consumed 8,000 tons of coal and produced approximately 140,000,000 pounds of steam.

Section of Ric-wiL prefabricated insulated steam conduit being lowered into shallow trench for steam connection to a new apartment at Shaker Square.

Central Heating at Shaker Square, Cleveland, owned and operated by the Shaker Co. suggests an ideal plan for post-war community development.

Fifteen years ago the Shaker Square district was planned by the Van Sweringen interests along lines now being considered by many communities for post-war development. A heating plant large enough to serve the entire district was erected and Ric-wiL underground steam conduit was installed for future connections . . . Time has proved the wisdom and foresight of the original planners. Today, this one boiler plant supplies heat and hot water through more than 10,000 feet of Ric-wiL Conduit to 700 apartment and multiple family dwellings, 45 stores, 30 office suites, a large tavern, a restaurant, a bank, a large theatre and 2 service stations.

Any Community Can Enjoy These Advantages:

- Savings of 15% or better in overall fuel consumption.
- Elimination of furnace or boiler tending by consumer.
- Promotes cleanliness in buildings heated.
- Provides extra room in building basements.
- Decreases fire and explosion hazard.
- Reduces smoke and soot, provides cleaner, healthier, community.
- Eliminates private coal delivery and ash removal.
- Gives uniform, clean heat quickly, whenever needed.

For information about Ric-wiL Conduit for central heat distribution get in touch with your nearest Ric-wiL agent or write to us direct.

RIC-WIL INSULATED PIPE CONDUIT SYSTEMS
THE RIC-WIL COMPANY · CLEVELAND, OHIO
AGENTS IN PRINCIPAL CITIES

representing labor, management, service groups, women's organizations, and youth groups were consulted by the American Council On Race Relations in the preparation of the pamphlet. The writing was done by Dr. Alfred McClung Lee, head of Wayne University's sociology department and authority on the 1943 Detroit race riot.

To meet a crisis the pamphlet advocates an emergency action program made up of ten specific steps shown graphically on the chart on the preceding page.

Individuals must learn to detect danger signals which usually precede race riots, the pamphlet declares, since "a race riot does not occur without clear-eyed and well-informed observers predicting it in advance, sometimes months in advance." Pulse-feeling for symptoms of interracial tensions can best be done by watching police attitudes, incidents of friction, demagogic groups, rises in delinquency and crime, rumor situation, congestions in housing and transportation, and employment conditions, the pamphlet points out.

If the picture is alarming an emergency committee must be formed, the handbook warns, describing the course of action to follow and how to organize such a committee for action.

Advocating the long-term program as the best plan for bettering interracial relations, the handbook shows how such a program can be set up and directed specifically towards elimination of handicaps of minority groups in employment, housing, education, churches, and social life generally.

Governmental Research Association Opens National Office

THE Governmental Research Association has announced the establishment of a permanent secretariat and the opening of a national office at 30 Rockefeller Plaza, New York City. G. Gordon Tegnell, formerly Assistant Research Director of the New Jersey State Chamber of Commerce, was appointed Secretary, and Dr. John F. Sly, Director of the Princeton Surveys, Princeton University, is Consultant.

Established in 1914, the Governmental Research Association is a national organization of groups and individuals professionally engaged in governmental research. Included on its roster are several hundred persons representing more than one hundred privately supported research bureaus and civic agencies located in thirty-one states, dedicated to the improvement of government and the reduction of its cost through citizen participation and cooperation with public officials.

The opening of national offices here in New York City marks the beginning of an intensification of the Association's four point program:

1. To further the establishment of local governmental research, taxpayer, and civic agencies, which, by the collection, analysis, and distribution of facts to citizens and officials aid in the improvement of government and the reduction of its cost;

2. To aid and coordinate the activities of such citizen agencies particularly on the local level, but as applied to state and national government insofar as those may affect local government;

3. To encourage the development and use of effective organization and methods for the administration and operation of government and of common standards for the appraisal of results;

4. To facilitate the exchange of ideas and experiences and to serve as a clearing house for members with respect to available results of research in government.

To achieve these purposes, the secretariat will develop a series of publications for members. It will provide a service center for council in the planning and development of projects in governmental research; foster the establishment of additional agencies; maintain field contacts with the membership; develop close association with schools of government and public administration; and encourage training and scholarship in the field.

The President of the Association is Leslie M. Gravlin, Director of the Governmental Research Institute, Inc., Hartford, Connecticut. Other officers and trustees are: Loren B. Miller, Director, Detroit Bureau of Governmental Research, and Vice-President of the Association; Alvin A. Burger, Research Director, New Jersey State Chamber of Commerce, and Treasurer of the Association; A. E. Buck, Institute of Public Administration, New York City; Carl P. Herbert, Director, St. Paul Bureau of Municipal Research; Lennox L. Moak, Executive Director, Bureau of Governmental Research of New Orleans; and Douglas Sutherland, Executive Secretary, Civic Federation, Chicago, Ill.

Adult Education—A Post-War Challenge for the Public Schools

QUOTING Herbert Hoover to the effect that the next battle in the campaign for democracy will be fought around the question of general education for a majority of grown-ups, just as the last great battle was for general schooling for all the young, *The School Executive* magazine in its July issue posed the following questions:

Should the public schools develop an educational program for those adults who have not had an opportunity to finish their schooling? For their graduates?
Do they have a general educational responsibility to the adults of the community?
Should they sponsor vocational, cultural, and citizenship programs?
Should they act as a coordinating agency for all adult education activities of the community?

Arguments for and against extension of public school adult education are presented, of which the case for the affirmative, in THE AMERICAN CITY's opinion, is much the more convincing. As questions for study and discussion, *The School Executive* suggests:

How many of the adults in your community have not finished grade school?
Should the public schools institute a program that will enable these adults to complete their training?
Should the public schools sponsor Americanization classes for the non-citizens in the community?
Should the schools develop a follow-up program for their graduates? What kind of adult education program does your school system have?
Does it fit in with community needs?
Is it well-rounded in subject matter?
Does it provide opportunities for all?
What basic philosophy underlies it?
Is it adapted to the special needs and abilities of adults?
Is your school system the center of the educational life in your community?
Would the schools render a real service if they acted to coordinate the community's various adult education programs?

City Manager Appointments

E. H. BOWERS has been appointed city manager of Greenwood, S. C., succeeding J. M. Marshall.

LEONARD G. HOWELL has been reappointed city manager of Port Huron, Mich.

HOWARD H. KRAMER, city manager of Milton, Ore., since January 1940, has become the city manager of Petoskey, Mich., effective June 22. He replaces P. T. Mitchell, who resigned because of ill health.

GLENN W. LADD has been appointed city manager of Clawson, Mich.

COL. C. E. O'CONNOR has been appointed city manager of Dunedin, Fla., to succeed Walter Bartholomew, who was recently promoted to Tarpon Springs, Fla.

CLAUDE SMITH, a former business man, has become city manager of Tryon, N. C., succeeding William Spivey.

CLARENCE E. RIDLEY
Director, International City Managers' Association, Chicago, Ill.

AVAILABLE *NOW*

The luminaire that cuts the cost of saving lives with light...

NOVALUX FORM 79

Because it is so fundamentally right, the Form 79 is a post-war model as it stands. And this luminaire is again available in its original aluminum construction.

Besides providing a means of ending the dangers of dark-street driving, the Form 79 offers unexcelled economy and attractive appearance. Make it your first choice for essential needs today, for full-scale relighting tomorrow. *General Electric Company, Schenectady 5, New York.*

Your local electric-service organization and the G-E Illuminating Laboratory can help you develop a program for modern public-safety lighting. Ask for information.

GOOD STREET LIGHTING—THE SIGN OF A GOOD PLACE TO LIVE

GENERAL ELECTRIC

453-34-3010

Buy all the BONDS you can—*and keep all you buy*

Dramatic Memorial Fountain for Cleveland

A WAR MEMORIAL for those who sacrificed their lives in World War II will be built on the Mall in downtown Cleveland as soon as materials become available. It is sponsored by the Cleveland Press, which is currently backing a drive to raise $100,000 for the project, the memorial fountain. Preliminary designs have been made by the Westinghouse Lighting Division.

Plans call for a pool approximately 130 feet long and 110 feet wide with cascading water displays grouped in an elevated basin and centering around a single solid jet rising to a height of 70 feet. Lighting effects will vary, as will combinations of water displays through a 30-minute cycle.

Names of Servicemen in Bronze

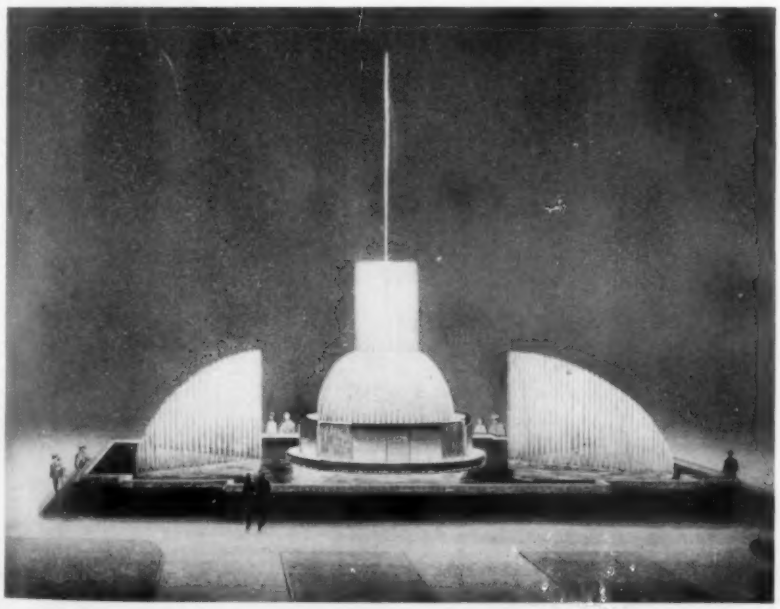
Names of the more than 3,000 servicemen from the greater Cleveland area who died in service will be perpetuated on bronze plates around the top of the main pool wall. This wall will be constructed of formed concrete, approximately 3½ feet to the top from the adjacent sidewalk level and with an outward-curving face. Making the top or coping overhang the base will permit the planting of low shrubbery under the overhang, where it will not be exposed to trampling.

In the center of the main pool will be a circular masonry inner basin containing the main water displays and their lighting. The diameter is to be approximately 35 feet, according to preliminary plans, and the height eight feet above the water level of the pool. Four alternate sectors of the basin will be constructed with crests at the top for the overflow of water from the main basin into the main pool. The other four alternate sectors, over which no water flows, will be constructed with appropriate bas-reliefs depicting general activities of the various service branches. This decorative treatment of the inner basin structure will greatly enhance its appearance during the winter, when no water displays or lighting are in use.

Feature water displays in the inner basin will center about the 70-foot jet. The height of this jet, as in the case of the other displays, is adjustable to permit reduction in height on windy days. Other displays will include (1) a ring of nozzles near the outer edge of the basin, with the jets turned inward to form a dome (2) a smaller-diameter ring of nozzles with vertical jets around the main center jet, (3) a group of four or eight nozzles arranged in a circle to give cone-shaped sprays and (4) a corresponding group of four or eight nozzles located between the cone shaped sprays to give solid vertical jets, and (5) a group of eight rings of nozzles concentric with the eight solid jet nozzles giving mushroom-shaped sprays. Each display will be controlled by an electrically operated water valve, to produce automatic cycles of combinations.

The feature displays in the inner basin will be supplemented by four straight water curtains in the outer pool, radiating from the edge of the basin to the outer corners of the pool. Like the displays in the inner basin, the operation of these curtains will be a part of the automatic water cycle.

Nozzles producing solid jets will be specially designed to aerate the water before it is projected into the jet, thus greatly improving the light-reflecting properties of the jet and giving the illusion of much greater water volume than is actually used.



Artist's conception of the Cleveland War Memorial Fountain sponsored by the Cleveland Press, to be built on the Mall on the Lake Erie shore. Preliminary designs made by the Westinghouse Lighting Division call for patterns of light, color, and water.

Patterns of Light

All water displays will be illuminated at night by floodlights submerged in the water of the basin and the pool. Lamps as large as 1,500 watts would be used to obtain the required intensities. The floodlights equipped with color lenses producing red, amber, green, blue, or white light will be separately controlled by means of electrically operated dimming equipment, so that one color is gradually blended into the next throughout the cycle.

Further elaboration of the color display is obtained by arranging part of the cycle so that some of the water displays are lighted in one color while others are in a different color or blend. For instance, the displays in the basin may be lighted in amber, the four waterfalls from the basin into the pool in red, and the four water curtains in the large pool in white. These combinations will be subject to continual change determined by the design of the color control equipment.

Good Street Lighting Calls for Tapered Steel Standards

WITH wartime restrictions lifted, two "wants" will be uppermost in the minds of your citizens — *unrestricted driving* and the *elimination of gloom.*

Both of these call for good street lighting, and good street lighting calls for Union Metal *tapered steel* standards.

There are three reasons: (1) Union Metal standards are designed by street lighting specialists to provide maximum lighting efficiency at minimum cost; (2) they're made of steel, cold-rolled and welded for permanence and ease of maintenance; and (3) they are available in a wide range of types and styles—to fit *your* budget and *your* lighting requirements.

For complete information as well as help in planning your post-war street lighting improvement program, get in touch with your electric utility company—or write The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL

Largest Producers of Street Lighting Standards

Decorative Lighting in Parks

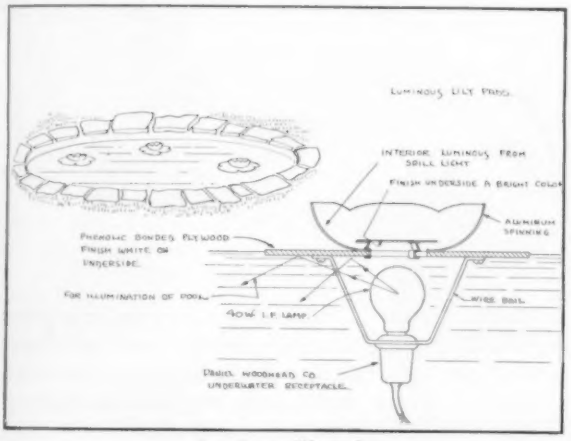
By E. D. TILLSON
Testing Engineer
Commonwealth Edison Co.
Chicago, Ill.

LIGHTING is usually thought of as a necessity. As an attraction, it is rarely used in a manner to exploit its great potentialities as an attendance factor. There are exceptions to this statement, notably the Chicago Fairs in 1933 and 1934, and later the New York and San Francisco Fairs, where the lighting effects unquestionably contributed to the atmosphere.

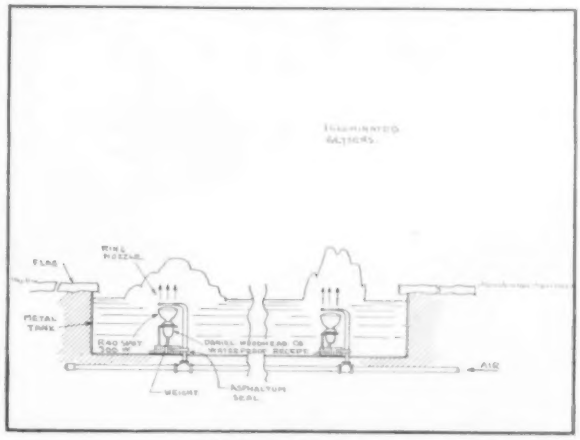
For many years the lighting of amusement parks was decidedly stereotyped and to some extent this still holds true. The time-honored festoons of clear or colored lamps strung around the grounds or buildings were for years the main and often the only use of lighting decoration. Possibly as a result of the world's fairs in the 30's there has been a limited use of more subtle and esthetic lighting effects. A few of the many kinds of decorative and utility lighting for amusement parks that a city may use are discussed here. The equipment involved can be quite inexpensive. Some of the most beautiful effects in the fairs were created with the simplest and least costly materials. It is largely a matter of ingenuity and mechanical aptitude on the part of some one person connected with the property or municipality. The accompanying sketches are intended to show the simplest of many of these set-ups and the use of common materials available to all. A partial list of lighting attractions follows.

Silhouette Effects

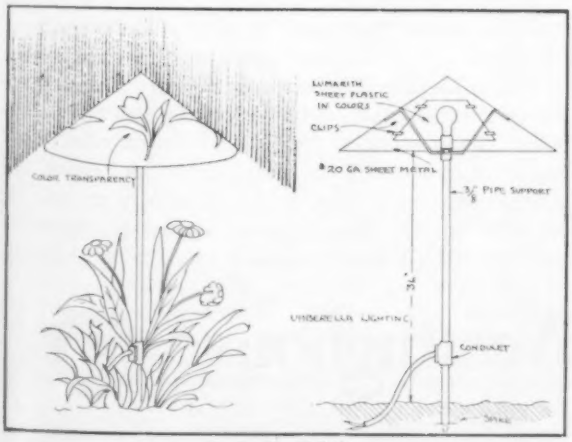
Silhouette effects may be created on both interior and exterior flat surfaces by means of plywood cutouts in the form of geometric or natural patterns. They are supported parallel to the wall or ceiling and from four to twelve inches away from it. Attached to the back surface of these cutouts are lamps which illuminate the wall and strikingly silhouette the pattern cutout. If properly done, several desirable things are accomplished: first, a low-priced embellishment of what would otherwise be a flat uninteresting surface, second, a note of gaiety which is usually at an elevation sufficient to carry for some distance. The points that should be observed in silhouette lighting are as follows: (a) To make them effective either a large single silhouette, or a multiplicity of smaller silhouettes composing a group should be used. Single small silhouettes or a number of them widely scattered are ineffective; (b) The wall which is illuminated should preferably be light in color, and flat paint should be used; (c) The lamps should be near the perimeter of the cutout and not at the center, otherwise the glow or halo surrounding the silhouette is weak; (d) Silhouettes are best used where the direction of traffic is head-on. Otherwise the lamps are likely to be exposed to view, and even when they


LUMINOUS LILY PADS
INTERIOR LUMINOUS FROM SPILL LIGHT
FINISH UNDERSIDE A BRIGHT COLOR
ALUMINUM SPINNING
PHENOLIC BONDED PLYWOOD FINISH WHITE ON UNDERSIDE
FOR ILLUMINATION OF POOL
40W I.F. LAMP
WIRE BAIL
DANIEL WOODHEAD CO. UNDERWATER RECEPTACLE

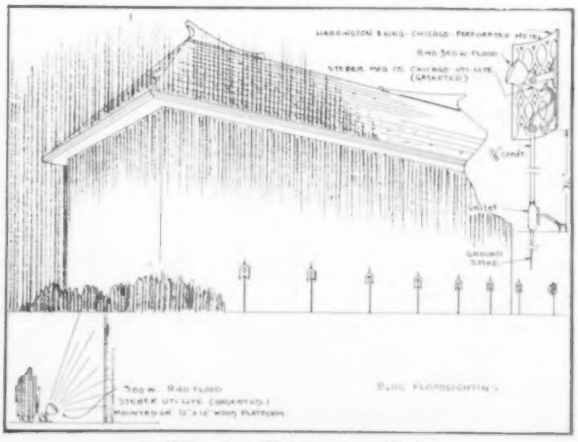
Luminous lily-pads



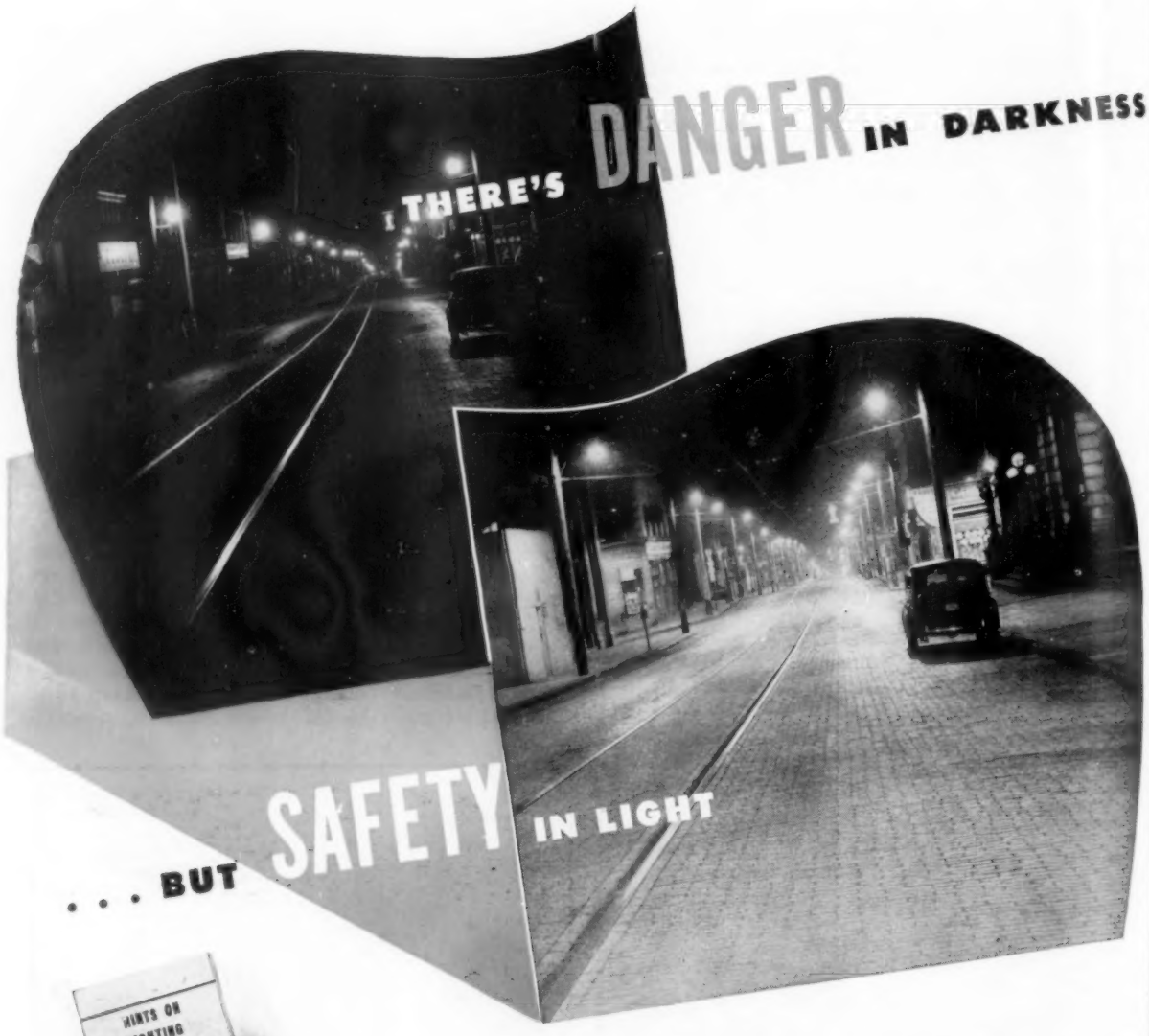
Illuminated geysers



Umbrella lighting



Building floodlighting installation



Dark streets breed danger . . . not only in increased accidents but in increased delinquency, robberies, assaults and vandalism. There's a challenge to every thinking public official in that cities and towns with the *lowest* per capita investment in street lighting suffer the *highest* rate of night fatalities and crime.

By contrast, those enjoying good lighting are also the safest.

Now is the time to plan for adequate Public Safety Lighting in your community . . . *before* the added build-up of traffic that will come as restrictions are lifted from gasoline, tires and speed. Westinghouse Street Lighting Engineers, with years of experience in every phase of street lighting, are aiding many cities in studying this problem. Their services, together with accumulated information and data gathered from many towns and cities, are available to any community. Get in touch with your nearest Westinghouse office or write Westinghouse Electric Corporation, P. O. 868, Pittsburgh 30, Pennsylvania. J-04016A

SYSTEMATIC MAINTENANCE
INCREASES LIGHTING EFFICIENCY

A street lighting system is no better than the manner in which it is maintained. Dust, fumes and dirt are ever present enemies threatening its efficiency. A single burnt-out lamp destroys the usefulness of any luminaire—perhaps creating a serious traffic hazard.

To help you with your street lighting maintenance problems, Westinghouse has prepared a pocket-size booklet entitled, "Hints on Street Lighting Maintenance". Among many other timely maintenance suggestions, which are applicable to all types of street lighting equipment, this booklet contains "Check Charts" that show at a glance what certain trouble indications mean—what causes them—and how to cure them.

WRITE FOR YOUR *FREE* COPY TODAY!

Westinghouse
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

are not, the reflections of the lamps on the back wall are objectionable and difficult to avoid.

Post lighting should provide both utility lighting and decoration. The former requires relatively large, efficient light sources, usually from 100 to 300 watts, with a reflector.

The directly downward light from these lamps can be used to illuminate flowers, foliage, flags, or other items attached to the lighting standards at an elevation about half that of the light sources, provided this point is above the reach of the public. Or the light source may be contained within a translucent cylinder or enclosure of fairly large dimensions, preferably in lantern form, which does not obstruct the downward light but uses upward light (otherwise wasted) to create an attractive color luminosity, the repetition of which throughout the grounds may easily provide a major feature.

In addition to post lights, the so-called *lighted umbrella* may be used to advantage. This consists of a pipe standard and "harp" surmounted by a metal cone in which the luminous elements are inserted. In addition to the glow of these elements there is the illumination that may be provided for flowers and shrubs. It should not be placed too close to traffic lanes, rather in less accessible places such as flower gardens or railed-off areas.

Illuminated Pools and Fountains

Due to the recent development of incandescent lamps which provide their own reflectors, and the live-rubber lamp receptacles which are waterproof, the problem of pool lighting has been greatly simplified and rendered quite inexpensive at the same time. We refer to the reflector and projector lamps, the so-called R_{40} and PAR types in the 150- and 300-watt sizes. As a precaution, the lamps must be completely submerged before the current is turned on. The water jets are placed directly over the projector lamp and the water is rendered luminous for any height that would be desirable in an amusement park. In this connection it must be admitted that fountains of any sort require much space, since gusts of wind will carry spray for considerable distances. However, water effects are not limited to high jets. The boiling geyser type of display is a case in point; what appear to be rather violently boiling springs of water, a foot or so high, may be created by means of compressed air, and can be picked up by the same type of lighting equipment and rendered quite brilliant.

Another form of display is the creation of air bubbles which rise from the bottom of the pool and break on the surface. This is accomplished by a ring with small orifices and compressed air. As the bubbles rise through the water they are illuminated by projector spots placed *horizontally* around the sides of the pool. The projectors must be provided with visors so as to confine the light to the water itself. The bubbles are practically spherical and appear like flashing jewels when they rise to the surface. They reflect the projected light in all directions and produce a brilliant and lively effect.

Exterior Floodlighting

A quieter type of display suitable for small shallow pools is the use of the so-called "lily pads" which are furnished with small-wattage bulbs located on the underside of the pad and which illuminate the bottom of the pool, which should be of some attractive color, preferably a marine blue or green. Waterproof live-rubber receptacles should be used, as in the case of projector lamps.

Until recently, floodlighting was considered an expensive form of display. The equipment was relatively bulky and costly. Today there is a liberal use of reflector-type lamps for this purpose. They are inexpensive and occupy a very small space. They can be attached to almost any light support.

One of the most attractive ways of floodlighting a building is to conceal the projectors at a reasonable distance from it behind shrubbery, often placed for this sole purpose. Not only does the shrubbery conceal the lamps from view, but is itself silhouetted against the luminous wall and provides a ground frieze and a luminous transparency in addition. This method can only be used where there is no traffic between the hedge or frieze and the building itself.

Extracted from *Illuminating Engineering* for May.

San Antonio's Skyline with Proposed Interregional Highway

Perspective of San Antonio's night skyline, showing how the interregional highway proposed by Michael Baker, Jr., Consulting Engineers, Planners and Surveyors, Rochester, Pa., would approach the city from the north. The view is one of several studies in the report, "Reconnaissance Report on San Antonio Interregional Highways," copies of which can be obtained from Michael Baker, Jr.

Fees to Be Collected at Dallas Airport

AIR lines using municipal airport facilities at Love Field, Dallas, Texas, must pay fees, and all future building expansions will be planned on an amortization basis, according to a recent decision of the Dallas City Council. A proposed $150,000 remodeling and expansion program for the administration building also was authorized on the condition that the air lines pay enough to amortize the costs over a five- or ten-year period. Acting City Manager V. R. Smitham said another $100,000 will have to be spent to provide additional concrete aprons in front of the building. City officials believe they will get three more air lines into Dallas. Construction of a new administration building is also expected, the present building to be rented to air lines for headquarters.

SHADOWLESS Visibility

Miller Meter sales franchise in several states still open. Write us today.

Millers "through-and-through" VISIBILITY tops any meter on the market today. One patrolman working one side of the street, or from a cruising car can spot violations instantly. That's why you can't beat Miller Manuals for performance and economy . . . why Millers are way out front in cities of every size . . . why Millers assure your getting maximum returns from your investment. Miller Meters are BACK AGAIN in production — for immediate delivery. Wire or write today.

DUNCAN METER CORPORATION

835 NORTH WOOD STREET **CHICAGO 22, ILLINOIS**

Municipal Law Notes and Decisions

Prepared by NATIONAL INSTITUTE OF MUNICIPAL LAW OFFICERS, Washington, D. C.
Charles S. Rhyne, *Executive Director*

Appropriations—Advertising City's View as to Legislation

City held to have authority to authorize the expenditure of funds to be used in advertising throughout the state the view that proposed state constitution amendment concerning the tax rates imposed on railroads would be detrimental to the city's interests because its revenue would be greatly decreased where the appropriation was taken from the railroad tax litigation fund. *City Affairs Committee of Jersey City* v. *Bd. of Commissioners of Jersey City*, 41 A. (2d) 798 (N. J. Mar. 28, 1945).

Barbers—License—Requirements for Issuance

Where the county barber commission denied plaintiff a license to practice his trade and the statute required as a prerequisite to its issuance an elementary school education or its equivalent, held that barbering for twenty-five years and his proven ability to practice his trade with his knowledge of sanitary requirements was sufficient basis for issuance of the license. *Barbers Commission of Mobile Co.* v. *Hardeman*, 21 So. (2d) 118 (Ala. Feb. 27, 1945).

Emergency Price Control Act—Applicability to Counties Denied

Emergency Price Control Act held not to apply to the sale of a tractor by the county because Congress used the word "government" in the definition of persons coming within the Act to refer to other national sovereignties comparable with the United States and not subdivisions thereof, thus defendant must comply with his auction bid despite statement of Price Administrator that the sale was above the ceiling price. *Twin Falls County* v. *Hulbert*, 156 Pac. (2d) 319 (Idaho Feb. 19, 1945).

Firemen—Engaging in Other Employment—Rule Prohibiting

Where Commissioner of Fire Department of New York City adopted a rule forbidding members of fire department to engage in other business or employment, held that application for an order directing reinstatement of fireman dismissed for violation of the rule was properly denied. *Calfapietra* v. *Walsh*, 54 N. Y. Supp. (2d) 231 N. Y. Sup. Ct. App. Div., Apr. 6, 1945).

Firemen—Pensions—War Leave—Honorable Discharge Provision

Under charter provision that firemen may retire on a pension after twenty years service and in computation of period of service provided for war service credit to one who returned to active duty after honorable discharge, where plaintiff, having served for nineteen years, was in military service when the twenty years period ended, held that plaintiff was entitled to the pension, the provision as to honorable discharge applying only to those whose period had not ended at time of discharge. *Gibson* v. *City of San Diego*, 156 Pac. (2d) 737 (Cal. Feb. 16, 1945). Reh. Den. Mar. 15, 1945.

Licenses—Buses—Depositing Fee Until Validity Determined

Where at the time when city consented to allow transit company to change from streetcars to buses a provision was inserted calling for a license fee provided for by ordinance ($75 to $200 for each bus) and city amended ordinance to require from $200 to $400 a year per bus, held that trustee would not be required to pay fees until validity of ordinance had been determined but he must deposit the amount with county treasury as security. *Tilton* v. *City of Utica*, 54 N. Y. Supp. (2d) 58 (N. Y. Sup. Ct. Oneida Co., Mar. 29, 1945).

Licenses—Grain Elevators—Reasonable Fee—Interstate Commerce

In an action to enjoin enforcement of an ordinance which required a license to operate a grain elevator and provided for payment of an annual fee of $300 for elevators holding less than one million bushels and $600 for greater capacity, held that the fee was not shown to be unreasonable or excessive and the ordinance did not conflict with the federal commerce clause where it applied to intra-and interstate commerce alike. *Edward R. Bacon Grain Co.* v. *City of Chicago*, 59 N. E. (2d) 689 (Ill. App. Feb. 21, 1945). Reh. Den. Mar. 14, 1945.

Licenses—Occupation Tax—New Occupation

Under an ordinance levying a license tax of $6 per quarter on general stores and hardware stores and $10 on meat markets, where plaintiff, who had been operating a general store for many years, acquired the adjoining building and started a hardware store, then installed a meat market in the back of his general store, held that the hardware store was a new business and subject to tax and plaintiff became liable for the higher meat market tax when he added business of a different classification. *Town of Newark* v. *Edwards*, 185 S. W. (2d) 925 (Ark. Mar. 5, 1945).

Meats—Selling of—Noncompliance with Ordinance

Conviction of defendant for violation of an ordinance requiring certain conditions upon which meat could be sold within the city, affirmed because it was not error for the city attorney to have remained in council room when mayor and council deliberated the case, the attorney taking no part in the discussion, and it was not essential that defendant be furnished a written accusation of charge against him if he had been informed and given a chance to defend. *Cosby* v. *City of Washington*, 33 S. E. (2d) 466 (Ga. App. Mar. 1, 1945).

Motorcycles—Riding "Double"—Statute and Ordinances Prohibiting

Where plaintiffs, riding "double" on a motorcycle in violation of an ordinance of the City of Los Angeles, were injured when they collided with defendant's car and defendant relied upon the violation of the ordinance as a defense, held that the ordinance was invalid because a statute prohibited the riding on any vehicle upon any portion not intended for the use of passengers and the state thus had occupied the field of regulation. *James* v. *Myers*, 156 P. (2d) 69 (Cal. App. Feb. 14, 1945).

Office of Price Administration—County as "Landlord"

Where the county had acquired 200 dwelling units at a tax sale in accordance with the applicable statute but did not file registration statements with the Area Rent Office as required by the Emergency Price Control Act and regulations issued thereunder, held that the county was a "landlord" within the meaning of the regulation and must comply with them. *Bowles* v. *Washington County*, 58 F. Supp. 709 (U. S. Dist. Ct. W. D. Pa. Jan. 23, 1945).

Officers—Vacancies in Commission—Duty of Remaining Members

Where charter of Ironwood City set up a legislative body of a commission of five members providing that vacancies be filled until next election by vote of remaining members and two vacancies occurred, two members constituting less than a quorum held not sufficient to fill a vacancy and where one member frustrated attempts to appoint a new member it was the duty of the three to take the steps necessary to comply with charter calling for filling of vacancies at the next election. *Burns* v. *Stenhold*, 17 N. W. (2d) 781 (Mich. Feb. 20, 1945).

Plumbing—Regulation of Sale of Used Fixtures

Ordinance held valid which regulated the sale of used plumbing fixtures by providing for inspection of the fixtures by city inspector who would place a sticker on each fixture for which the owner must pay $1 per sticker, it being shown that such amount was necessary to defray expense of regulation and that there had been a heavy traffic in used plumbing fixtures stolen from vacant houses in the city. *Montgomery* v. *Oklahoma City*, 157 Pac. (2d) 454 (Okla. Apr. 3, 1945).

Post-War Projects—Appropriation of State for Planning—Constitutionality

Where statute appropriated $10,000,000 to be allocated to cities and counties on a matching basis as state aid in formulation of plans and acquisition of sites for public works to provide post-war employment and set up a board to administer the act but, upon application of various cities the board refused to make allocations, held that the act was constitutional, there being no gift of public funds, only one appropriation for a single purpose and the substantive provisions of the act being germane to the declared legislative purpose. *City of Los Angeles* v. *Post War Pub. Works Rev. Board; Los Angeles County* v. *Same; City of Oakland* v. *Same;* 156 Pac. (2d) 746 (Cal. Feb. 23, 1945).

Signs—Ordinance Prohibiting Maintenance Over Sidewalk

Where plaintiff had erected a vertical sign over sidewalk under a permit issued by the city and the city passed an ordinance prohibiting such a sign, held that plaintiff had no vested right to maintenance of the sign and the ordinance was not arbitrary or capricious because it permitted signs on a marquee on theaters and hotels. *Mallory, Inc.* v. *City of New Rochelle*, 53 N. Y. Supp. (2d) 643 (N. Y. Sup. Ct. West Co., May 1, 1944).

Steam Boilers—Licensed Engineers for Operation of

Where defendants, the corporation and its plant manager, were convicted for violation of an ordinance providing that at all times when certain steam boilers are in use and engines run there shall be a licensed engineer in charge, held that it was unnecessary for the city to show that an engine was in operation at the same time as a boiler, but the ordinance contemplated the "user" of the boiler to possess some proprietary interest in it and the plant manager did not have such an interest. *City of St. Louis* v. *Consolidated Products Co.*, 185 S. W. (2d) 344 (Mo. Feb. 6, 1945). Reh. Den. Mar. 6, 1945.

Just what are the benefits of Metered Parking?

. . . read what a few satisfied users of Dual Automatic Parking Meters report:*

"Wonder how we got along without them!"

"Meters have helped alleviate the congestion. Merchants and business men in the downtown area wonder how we got along without them," says Memphis, Tenn.

"Shopkeepers express hearty approval!"

"Decidedly satisfactory. The meters have driven all-day parkers to move to remote areas or parking lots. The public and shopkeepers express hearty approval," says Buffalo, N. Y.

"Very satisfactory!"

"Merchants and business men now approve meters after having fought their installation," says Minneapolis, Minn.

"Parking turnover tripled!"

"Turnover in curb parking space about three times what it was formerly without meters," says Seattle, Wash.

"More will be installed!"

"As soon as more meters are available, more of them will be installed in downtown area," says Akron, Ohio.

And these are only five out of the 166 cities that installed Duals before the war.

**Based on a survey conducted by Indianapolis Real Estate Board and reported March, 1945.*

INSERT NICKEL
60 MINUTE PARKING
9 A.M. TO 4 P.M.
WHITE POINTER SHOWS UNEXPIRED TIME
GREEN SIGNAL FALLS AT END OF PARKING PERIOD
COIN DISPLAY

FREE..

For complete details on the many other benefits of metered parking . . . for facts on Duals, America's foremost parking meters . . . for help in solving your own postwar traffic and parking problems, write for this booklet today.

THE DUAL PARKING METER Company

Harter Bank Building
★
CANTON 2, OHIO

Zoning and Planning Notes

Edited by FRANK B. WILLIAMS
Author of *The Law of City Planning and Zoning*

Churches in Residential Districts

Church Exclusion Unreasonable and Void

ARIZONA.—*Ellsworth, Building Inspector* v. *Gercke, Catholic Bishop,* Supreme Court, February 24, 1945, reported in 156 P. 2d, page 242.

This is an action by the Bishop of the Diocese, owner of land in a district classified as Residence "A" by the zoning ordinance of the City of Mesa, to compel the building inspector of the city to issue to him a permit for the erection of a church upon his land. The zoning ordinance excludes churches from the district, and the Bishop challenges the validity of this provision. This contention the court sustains, saying that any such restriction is clearly arbitrary and unreasonable.

In support of this ruling the court quotes the following passage from the opinion in the case of State ex rel. Synod of Ohio of the United Lutheran Church in America v. Joseph, 130 Ohio State Reports, 229, 39 N. E. 2d, 515, as follows:

"Fully to accomplish its great religious and social function the church should be integrated into the home life of the community which it serves. Churches in fitting surroundings are an inspiration to their members and to the general public. If located in the residential district, space, perspective, greenswards, and trees aid in setting off the beauty of the building and thereby increasing its inspiration. To require that churches be banished to the business district, crowded alongside filling stations and grocery stores, is clearly not to be justified on the score of promoting the general welfare."

EDITOR'S NOTE: It is well established law that a church cannot be barred from a residential district, however "exclusive"; and that any provision of a zoning ordinance attempting to do so is unreasonable and unconstitutional. Bassett, "Zoning," pages 70, 200.

Many people think of a residential district as one in which all buildings but residences are excluded. This is not the case. In fact, only those uses which are inimical to residence should be prohibited in such districts.

Accessory Uses—Church

PENNSYLVANIA.—*Overlook Farms Club* v. *Zoning Board of Adjustment of City of Philadelphia,* Supreme Court, January 2, 1945, reported in 40 Atl. 434.

These proceedings are in review of the decision of the Zoning Board of Adjustment of the City of Philadelphia granting a permit for the use, in a single family zoning district, of the home of the rabbi, also as his office and for public worship.

The zoning ordinance allows, in the district, accessory uses which are customary and incidental to any permitted use, not including the conduct of a business; but they may include the office of a physician, dentist, or other professional person in his dwelling. Churches, chapels, or other places of worship are allowed in the district.

The opponents of the granting of the permit contended that a person may have a home, or a home and office incidental to it, or a place of worship in one structure in a residential district, but cannot have a structure for all three of these uses. They claim that only one accessory use is allowable, otherwise there might be a dwelling over a railroad station, telegraph office, or museum, all of which are allowable uses in the district.

The petitioner answers that there is an obvious incongruity in a dwelling over a railroad stations, telegraph office, or public museum; but none in having a dwelling over a church or attached to a church; for, according to a well-known statement of Justice Holmes, differences may be only in degree and yet be important (*Hadacheck* v. *Hadacheck,* 201 *U. S.* 562). The Court goes on to say:

"The idea of a home and a church being under one roof is not shocking to either the practical or the esthetic sense of a normal human being. A home and a place of divine worship are not necessarily mutually exclusive. . . .

"The formal worship of God, in family homes, was much more widely practiced in this country in a very creditable earlier era than it is in this more materialistic age, and such worship was not always confined to the immediate family. Very frequently many neighbors joined in the worship. There are well known and respected religious sects in this state and country which erect no church but conduct divine worship on the several Sabbaths of the year in the respective homes of the communicants.

"'It is quite a normal situation for a manse or rectory to adjoin a church building, but in the usual case of the kind which has been practiced for decades, the two are separate buildings and not imposed one on top of the other'. The 'picture' thus presented by the appellant and which he wishes to prevent becoming an actuality is that of a dwelling house in form being physically imposed on a structure which is in form a church. This would indeed be an architectural hybridity for which, we take it for granted, no building permit would ever be issued in the City of Philadelphia.

"It is a building's uses and not its facade or its inner plan which it is the Board's duty to pass upon. That the same building may house a religious congregation on the days of worship, and on all days may provide an office for a rabbi and living quarters for his family, did not impress the Board as being contrary either to the ordinance or to anything else which it is the business of these officials to protect. That the home of a clergyman is often physically attached to the side of the church so that immediate ingress and egress from one to the other is possible, is a fact open to observation in almost every large city of this country, and no one appears to have found anything objectionable in such an arrangement. Why the vertical integration of a clergyman's dwelling-place with his church is objectionable while their horizontal integration is acceptable, we are not informed."

Combined Residential and Religious Uses—Side Yard

PENNSYLVANIA—*Kurman* v. *Zoning Board of Adjustment of City of Philadelphia* (Overlook Farms Club, Intervenor), Supreme Court, January 2, 1945, reported in 40 Atl. 2d, page 381.

This case should be read in connection with the foregoing case.

Kurman is a rabbi of the Jewish Orthodox Faith, and the owner of the premises in question—a detached building located in a residential "A" zoning district. The building was designed as a dwelling and has been so used in the past. The rabbi has applied for and obtained a permit to use his premises as his dwelling and as his office as a rabbi. Under this permit he utilized a room in his house as a meeting place for children whom he instructed in religious matters. He also organized a church group and conducted religious services there over each week-end, about fifty people usually attending. The Philadelphia zoning ordinance provides that buildings in the district in which the property in question is located may be used, inter alia, as "(1) Detached single family dwellings. . . . (2) churches, chapels, or other places of worship." Combination of these two uses are neither listed nor expressly forbidden, and should a building meet all the requirements for both types of uses, there is no reason why such a building could not be used for both purposes.

The dispute in this case concerns the side yard on one of the sides of the building. If the building is used solely as a detached dwelling, the side yards may be only ten feet. If it is used as a church, the side yards must be fifteen feet wide.

In this case, one of the side yards is only twelve and a half feet, in extent. The court holds that the Board of Adjustment was authorized in refusing the permit for both residential and religious uses of the building unless the requirements for both uses were met. The court also holds that there can be no undue hardship in this case, since it is a projecting bay window not difficult or unduly expensive to remove, which makes the side yard in question too narrow. The requirements of the ordinance with regard to side yards in the case of churches are for the protection of the people frequenting them and should be enforced.

PUBLIC TRANSIT MOVES PEOPLE

7 TIMES AS EFFICIENTLY

(from the standpoint of street space needed)

That's why transportation planning should begin with PUBLIC TRANSIT

● **THE AUTOMOBILE** has given people new freedom in the country but has choked their movement in cities. Existing streets are inadequate to carry all traffic by automobile, and here is why it is not economical to make them adequate:

Based on the national peacetime average of 1.75 persons per automobile, 29 automobiles are required to move 50 persons—using 500 square feet of street space per person, and bottlenecking a full city block. These 50 people can all ride comfortably and swiftly in one public-transit vehicle—using only 70 square feet of street space per person. Therefore, public transit uses street space 7 times as efficiently. That's why it can greatly reduce the enormous expense of street widening and super-highway construction.

The parking problem has assumed undreamed of proportions. Traveling alone in an automobile, one person requires 240 square feet to park his car. At the average load of 1.75 persons, the parking area per person is 140 square feet. This is almost as much space as an office employee needs to do his work—150 square feet. Thus, if all employees in an office building drove their cars to work, another building of about equal size would be required to store their cars!

Public-transit vehicles use street space most efficiently, ***require no street parking space,*** and minimize traffic congestion. Thus they insure the fast, free flow of people on existing streets throughout every section of the community. That's why transportation planning should begin with PUBLIC TRANSIT.

General Electric Company, Schenectady 5, New York

Team Up with Transit—You'll Pep Up the Lifestream of Your City!

GENERAL ELECTRIC

107-137-9560

BUY WAR BONDS

Traffic Control and Facilitation

Conducted by Traffic Control & Facilitation Committee, Institute of Traffic Engineers, 60 John St., New York

W. L. Robinson, Chairman; M. A. Beebe, J. W. Arch Bollong, Edgar Copell, F. B. Crandall, J. B. Ecker, H. G. Eckhardt, M. O. Eldridge, J. A. Head, F. W. Hurd, D. G. Manning, J. B. Moriarty, Lt. D. T. Myers, Harry Porter, Jr., William B. Powell, Martin Stark, William Van Duzer

Improvement in Bus Loading Facilities

By JOHN B. ECKER
Director of Research and Planning
Capital Transit Company
Washington, D. C.

DURING the war emphasis has been laid necessarily on the use of transit facilities for transporting employees to and from work. The concentration of employees in large buildings and their increased use of mass transportation have developed many loading problems. Transit may decrease to some extent in the post-war period, but in large cities transit services will probably continue to be much more active than they were before the war.

Improvement in terminal operations of transit vehicles will be needed. Mass transportation passengers are affected, and efficient use of street space and potential traffic interference between transit and the private automobile are involved.

In Washington, as in other cities, terminal facilities in a number of cases have been developed on present streets with the result that street traffic congestion has been decreased, delay reduced, and loading has been improved, from the transit patron's standpoint.

One of the most acute conditions occurred during the evening rush period at the Navy and Munitions Buildings (south side of Constitution Avenue between 17th and 21st Streets). The major portion of 35,000 employees working here use transit facilities to go to and from work. Original facilities for loading passengers stretched nearly the entire 1,100 feet of curb area on Constitution Avenue.

Approximately 113 buses operated through this single-curb lane in the maximum hour: 36 buses in the maximum fifteen-minute period. Buses originally lined up solidly the entire 1,100 feet of the loading area and moved out in groups on the proper signal, boarding being permitted anywhere in the area. Six separate eastbound bus routes, each with one or more destinations on the same route, used this general loading area.

Even though the hours of employment in the two buildings were staggered, there was considerable confusion on the part of patrons because no designated loading areas were provided. Partially loaded buses had to keep moving with short and frequent stops to prevent delaying the entire line. Consequently, passengers had to move back and forth in the loading area to locate the bus they desired. This caused congestion, confusion, pushing, and irritation.

Buses fully loaded shortly after pulling into the area were unable to pull out and required excessive time to complete their trip through this area. It also reduced the number of buses able to make the left turn on each traffic light signal by forcing all buses to remain in the left-turn curb lane.

Though sidewalk loading space was limited, analysis indicated that segregation of loading areas by routes would materially lessen the running time and eliminate considerable passenger confusion. Unfortunately there was not sufficient space to segregate each route serving the area, and it was necessary, in order to accommodate the passengers, that the loading areas be located within reasonable distance of the employment buildings.

After study of a number of plans the following changes were made:

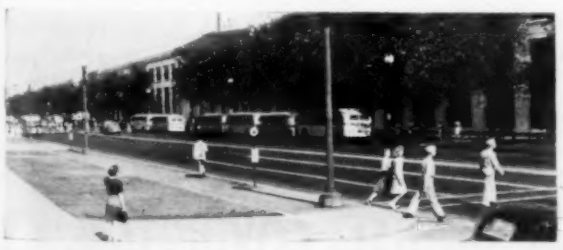
1. The loading area for the Connecticut Avenue bus line was moved from the south side to the north side of Constitution Avenue and operated in a westbound instead of eastbound direction. Special loading areas were designated on the north side for this line, in conjunction with two other routes which heretofore had operated westbound. This reduced the number of buses used on the south side of the street and also passenger congestion on that sidewalk.

2. The remaining five routes continued to use the south side for their loading operations.

One group of two lanes, operating eastbound beyond 18th Street, loaded mid-way between the two buildings and on the far side of 17th Street. The other group of three lanes used locations at the main entrance of each of the two buildings.

Buses obtaining their full load at the first stop could then pull into the main traffic stream and make the left-hand turn at 18th Street from the center lane. All other buses making a left-hand turn were permitted to do so from the curb lane under police supervision. This practice has proved successful in clearing buses through this intersection. A substantial reduction in operating time through this area has been effected, averaging about three minutes and amounting to almost 40 percent. Since the time of the original changes, various other refinements have been made, following more or less the basic principles outlined above.

A similar situation, though not as



LEFT: Bus loading at south curb of Constitution Avenue in Washington, D. C. at Navy-munitions buildings in evening rush hour period showing intermediate loading points after segregation of loadings. RIGHT: Bus terminal at Twelfth Street and Pennsylvania Avenue, N.W., during the evening rush period.

O.K.'d

BY CITY OFFICIALS AND MERCHANTS EVERYWHERE

SEE REGULATIONS ON OTHER SIDE
INSERT ONE COIN AT A TIME
TURN HANDLE TO STOP AFTER EACH COIN
FREE PARKING ON SUNDAYS
MI-CO METER

Wherever installed, MI-CO Parking Meters have won the unqualified endorsement of city officials and merchants. City treasuries have been enriched; merchants say their business increased; and motorists like them because they assure a place to park. Entire communities have benefitted. ¶ MI-CO Meters offer you many advantages. Perhaps the most outstanding is low cost maintenance, and this feature alone is responsible for a number of installations. Low cost upkeep is the result of correct engineering, sturdy construction, and fewer moving parts. Get all the facts. Write for folder which gives complete information. Of course these meters will not be available until restrictions on materials are lifted, but the time to plan is now, and it will be to your advantage to give most careful consideration to MI-CO Parking Meters for your community.

Experienced Representatives Wanted!

MI-CO METER CORPORATION, 231 Court St., COVINGTON, KY.

Manufactured under the patents of F. L. Michaels by The Michaels Art Bronze Co., Inc.

acute, occurred at the War Department Building at 21st Street where a number of different routes loaded in a limited space in the afternoon rush period. The five routes were grouped according to general sections of the city to which they were going, resulting in three groups. The walk was increased approximately 200 feet on two of the routes, but the walk on the other two was kept the same. This practice improved speed of loading and reduced passenger confusion and interference.

Local and express buses of the same line have, likewise, been segregated at 17th and K Streets, N.W., with consequent improvement. Preliminary studies have been made of ways and means to effect segregation of bus passenger loading operations on the four northbound routes, totaling 105 buses in the maximum hour on 13th Street, N.W., between F and G Streets.

The foregoing illustrations show how improvements can be made to mitigate traffic congestion, reduce loading time, and facilitate the movement of passengers using existing street.

On the other hand, tandem loading, such as described above, is not as effective in improving the regularity of service and reducing the confusion on the part of patrons as parallel loading, making use of separate lanes for various routes. This has been accomplished to a certain extent at a temporary bus terminal in the vicinity of 13th Street and Pennsylvania Avenue. Approximately 5,600 passengers are handled at this point in the two hour afternoon rush period. There are four routes operating from this terminal, with a total of 138 trips in the rush hours. Operations at this point have been materially improved by the addition of a supplementary outbound loading lane.

Buses lined up all down the block in Washington, D. C.

A similar terminal is located on the public streets at 12th and Pennsylvania Avenue, N. W., and is used by the nine suburban Virginia lines of the Alexandria, Barcroft and Washington Transit Company. This company uses three of the four parallel lanes and handles in the maximum hour during the evening rush approximately 3,600 passengers with approximately 75 buses. The fourth lane is devoted to automobile and taxicab use.

With the return of normal vehicular traffic after the war, off-street transit terminal facilities integral with development of the buildings should be planned. This is being considered in the planning of some of the future large employment areas in the District of Columbia.

Survey of Transit Needs on a Metropolitan Area Basis

Gives keener point to the master plan, strengthens cooperation among communities, yields more accurate results

By SHERWOOD L. REEDER
Director of Master Planning
Cincinnati City Planning Commission

AN "orgin-and-destination" survey, believed to be the first ever conducted under four-cornered cooperative financial auspices, is now going on in the Cincinnati Metropolitan Area. It will have required, before it is finished, the services of nearly one hundred specially trained personnel and an over-all elapsed working time of approximately six months.

The many-faceted study includes the inter-travel of all classes of vehicles—automobiles, trucks, taxis, buses, and street cars—covers parts of two states, three entire counties, and four Ohio river bridges. Four separate public agencies share the cost. The cooperative agreement is in the form of a written contract signed by the City Planning Commission for the City of Cincinnati, the Federal Public Roads Administration, and the State Highway Departments of Ohio and Kentucky. Although much post-war highway planning has already been done by both states, this is the first formal coordination between them and the metropolitan area of Cincinnati.

From the point of view of the City Planning Commission, which engineered the four-party arrangement, the survey is one of the basic studies which, after the general land use has been established, will form one of the chief pillars of the master plan of the area which comprises Hamilton County in Ohio, Kenton and Campbell counties in Kentucky. The master plan is now in the stage of preliminary studies.

The primary purpose of the survey is to collect information through questionnaires filled out by interviewers at the homes of residents on the use of streets, highways, and bridges by all forms of transportation. These factual data will be translated into estimates of the future transportation needs of the area. In addition, out of it is coming a veritable network of statistical by-products which will be made available to the highway and other departments of both states, the counties and the municipalities of Cincinnati, and Covington and Newport in Kentucky directly across the river.

The entire area has the common

JOHN A. BEELER

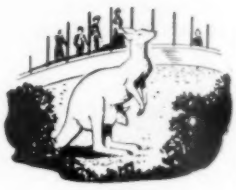
The death of John A. Beeler at 78 removes another prominent figure from the city transportation scene. His carefully proved article under his own dramatic caption, "Is the Trolley Coach Stealing the Show?" in the January 1945 issue of THE AMERICAN CITY, attested to his continued ability to grasp and present essential values.

we call it "our family fun special"...

BALL PARK

MOVIES

BEACH



ZOO

THE PROPER USE OF TROLLEY COACHES IN PUBLIC TRANSPORTATION CAN:

Reduce congestion, confusion and noise in residential and shopping areas

Enhance real estate values

Simplify street maintenance

Reduce traffic tie-ups, reduce use of private cars and ease parking in downtown areas

Provide flexibility of expansion to serve new communities

. . . and bring more customers and greater profits to shopping and business areas.

Trolley Coaches handle all peak holiday crowds easier and faster:

One of the real tests of any transit facility is in the handling of large masses of pleasure-bent public. By their flexibility in traffic, their smooth, quiet, odorless, comfortable and dependable operation, Trolley Coaches have literally changed the complexion of modern city streets. They have brought new convenience to families formerly accustomed to using the family automobile for "family fun".

Westinghouse electrical equipment has made possible many of the advantages which have brought greatly improved service for the family. Westinghouse facilities are at the command of transit operators, to help improve service still further, build new passenger revenue and keep traffic *moving* on the streets of your community.

For full information call your Westinghouse office or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-95106

Westinghouse

MOVE PEOPLE NOT VEHICLES

TO MOVE MORE PEOPLE...MORE EASILY...IN LESS TIME

problem of highways insufficient for present traffic volumes, not to mention the increased capacity and improvement in safety features which will be needed to meet post-war and long-future traffic demands. It is realized that people must be able to move freely and efficiently from home to work and in their social and recreational pursuits, and that products must move smoothly and swiftly from farm to market and from industry to consumer, if we are to develop the resources of our area effectively. As it is generally conceded that the influence of a city like Cincinnati extends outward for 25 to 35 miles and that of the smaller cities in the area at least five or six miles beyond their limits, the only realistic way to survey the situation is on a metropolitan area basis as adopted here.

A Typical Day's Traffic

The technique we are using is that adopted by the Public Roads Administration. All travel for a specified day of a representative sample of the entire area's residents (one in twenty) is being recorded. This sample will be carefully controlled so that the results can be expanded to show in detail the total internal movement in the area for a typical day.

As a preliminary to field interviewing, an official postcard is sent several days in advance to those who are to be called upon and the interviewers carry credentials which they show on request.

A sample of taxis and trucks from the vehicles registered in the area is selected to complete the analysis of internal movement. One in every five is chosen. From them information is obtained showing the previous day's travel.

In the out-of-city areas the object sought will be accomplished with sufficient accuracy in terms of vehicles. Watchers are stationed for specified periods near the periphery of the area at the chief highways upon which traffic enters and leaves. These watchers stop cars and secure the necessary "origin-and-destination" information.

To Determine Types of Vehicles Needed

In the cities, a study of the movement of passenger cars, taxis, trucks, buses, and street cars is not enough. We must get right down to the individuals themselves, whether they travel by private car, bus, street car, or taxi. Here planning calls for detailed knowledge of the daily movements of masses of people and we must provide future facilities for that movement by whatever type of vehicle is indicated as most appropriate. Of course, we need also to know the daily movement of merchandise and provide equally appropriate facilities.

Similar surveys have been made in other cities but we feel ours is unique because it illustrates the extent to which cooperation may be carried successfully between multiple agencies at various levels of government.

Due to a publicity campaign carried on by the City Planning Commission since the inception of the field work in the daily and weekly newspapers, organs of a large group of civic associations and other key groups, interviewers report that residents are not only now familiar with the need for the survey and its vital importance to them, but are eager to do their part to expedite the work and safeguard its accuracy.

Chief among the advantages of joint conduct of this study are, we believe:

1. It makes possible greater accuracy, an indispensable element in the making of a realistic metropolitan area master plan.

2. The data collected on both sides of the river will dovetail as a basis for the post-war bridge and highway programs of both states.

3. It acts as a harbinger of future cooperation between Cincinnati and its neighbors in the solution of mutual planning problems.

4. Each of the communities in the three counties is sharing the benefits of the best thinking of the planners in all the cooperating agencies.

5. It cements the growing consciousness of "the metropolitan area" among the residents separated by a river, municipal, county, and state lines.

6. The people of all the communities have a simultaneous opportunity to assist actively in the work.

Modern Electric Transportation for San Francisco

SUBSTITUTION of 115 trolley coaches and 50 motor buses for 125 street cars now operating on ten major lines of the Municipal Railway of San Francisco is a major proposal in the post-war transportation plan submitted to the San Francisco Public Utilities Commission by Leonard V. Newton, consulting engineer.

In all, says *Passenger Transport*, the plan calls for purchase of 217 double-end, multiple unit operation PCC cars; one hundred and twenty-seven 44-passenger trolley coaches, and fifty-five 44-passenger motor buses. It was recommended that all except five of 575 streetcars now in operation be disposed of because obsolet. A majority of the city's fleet of 250 motor coaches will be approaching the end of their usefulness in the next five years.

Specifications for the new PCC cars will permit their use in a subway, which, while not discussed in the present plan, remains a possibility if surface transportation proves inadequate.

Some use may also be found for trolley coaches as replacements for cable cars, Newton pointed out, although he recommended continued use of cable cars and urged acquisition by the city of the privately owned California Street Cable Railroad Co.

Now that Newton's plan, prepared after thorough study of various traffic proposals advanced during the last 25 years, has been submitted, various civic groups already have started discussing how to raise the $23,369,126 which Newton estimates will be the ultimate cost of purchasing new equipment, remodeling real estate, repaving streets, and erecting overhead systems.

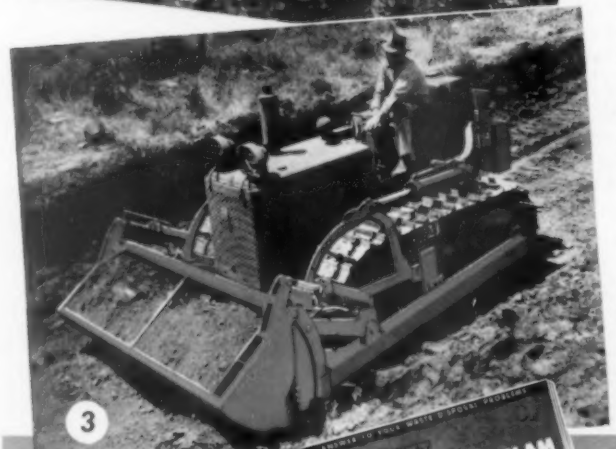
Three methods have been suggested: General obligation bonds, requiring a two-thirds vote; revenue bonds, requiring but a majority vote, or a fare that might go as high as 10 cents, the latter to be put into effect at the earliest possible date to start raising the funds.

Whatever the outcome, Newton believes it will take at least five years after the war to obtain the equipment recommended. He recommends that the program be undertaken in definite steps, with replacement of worn-out equipment of the Old Market Street Railway as the first step.

Post-War Tools

INDICATIVE of post-war purchasing for municipal departments for which plans are being formulated even now is a request received by MUNICIPAL INDEX from Chief Engineer J. F. Kunesh, Department of Public Works, Honolulu, Hawaii. Engineer Kunesh filled out request cards bound in the 1944 edition of MUNICIPAL INDEX for catalogs, price lists, and information on the following: parking meters, vehicle testing equipment, traffic equipment, and street lighting; engineering equipment, engineering textbooks, office equipment; municipal scales, asphalt equipment, rollers, bulldozers, trucks, graders, compressors, drills, and equipment for road repair, sewer maintenance, water works, refuse collection and disposal, and street cleaning.

Now almost extinct, the Texas Longhorn brings colorful memories of early Texas.



THRIVING BROWNWOOD, TEXAS, TAKES ANOTHER STEP FORWARD

...Adopts Drott Bullclam Shovel Method Of Sanitary Fill

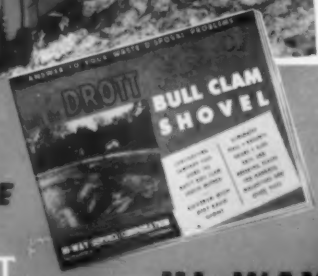
Home of coal mines, oil wells, cotton gin establishments, flour mills... large shippers of cattle, pecans, wool, dairy products, poultry, vegetgbles... seat of Daniel Baker and Howard Payne Colleges... yet only 14,000 population... Brownwood, Texas, is indeed a thriving community. Speaks well for the Drott Bullclam Shovel method of Sanitary Fill when a city like Brownwood adopts it! And a city this size! Proves its economy, too! Go forward with Brownwood and the many other progressive communities that are now using this new method of refuse disposal. Investigate!

1 *Start of Brownwood's new Sanitary Fill. Left: completed section. Note refuse at far end of trench — compacted not burned. Drott Bullclam Shovel, foreground, handles all operations — digging of trench, compacting and covering refuse, maintaining site. No other equipment necessary!*

2 *Thorough compaction to achieve proper settling is most important. Easily obtained by combined weight of Drott Bullclam Shovel and tractor traveling back and forth over rubbish.*

3 *Not a major dirt-moving project, all you need to construct a Sanitary Fill is a Drott Bullclam Shovel with tractor and operator. Only shallow trenches are necessary to catch refuse and to provide covering material.*

Get The Complete Story!
Send For This Book — "Answer To Your Waste Disposal Problems... with the Drott Bullclam Shovel" **FREE**



- **DROTT BULLCLAM SHOVEL FITS ALL MAKES AND CURRENT MODELS OF CRAWLER-TYPE TRACTORS, from 35 to 130 h. p. Three sizes, 1, 2 and 3 yd. capacities.**
- **Operated by DROTT POSITIVE, CLOSED HYDRAULIC SYSTEM. SMOOTH • QUICK • DEPENDABLE. Keeps dirt and air out... keeps oil in! Used successfully on Drott equipment for many years.**

DROTT
UNIVERSAL
EQUIPMENT

HI-WAY SERVICE CORPORATION
3841 W. WISCONSIN AVE. • MILWAUKEE 8, WIS.

Wholesale Blood Tests for Venereal Diseases

By GEORGE A. DENISON, M.D.
Health Officer
Jefferson County Board of Health
Birmingham, Ala.

DURING the two months of May and June 1945, as much has been done in Birmingham and Jefferson County, Ala., in the detection and treatment of venereal diseases as is ordinarily possible in ten years.

The campaign was conducted under the provisions of a law enacted by the 1943 Alabama Legislature that "all persons between the ages of 14 and 50, residing or living in the State of Alabama, shall have their blood examined for syphilis by an approved laboratory test." The State Health Department is charged with the execution of the law.

The law provided that the testing be done by counties, and prior to May 1945 eight rural counties had been tested. At that time the U. S. Public Health Service became sufficiently interested in the project to offer laboratory facilities and medical personnel so that Jefferson County could be tested with much greater dispatch than the rural counties and at the same time offer rapid treatment to all infectious cases of syphilis found.

On the first of May 1945 the publicity campaign was begun and was carried through to the end of the program. Newspaper articles and advertisements, spot radio announcements, street car posters, and large signs on lamp posts were used and thousands of personal contacts and circulars.

On May 15 the first blood taking teams went to work. The volume slowly increased, so that soon as many as 9,000 blood specimens were being drawn in the stations and examined in the laboratory daily.

Those tests that were positive, doubtful, or unsatisfactory were placed on special forms and the persons were requested by letter or personal visit to return to a "secondary station" for a history, physical examination, and a second blood test. Many early cases of syphilis were found at these examinations, and these cases were referred to private physicians or to the rapid treatment center.

Incomplete tabulations indicate that approximately 92 percent of the eligible population (300,000) reported voluntarily for their blood tests. Of this number, approximately 8.5% were positive, 3.4% were doubtful, and 1.3% were unsatisfactory for one reason or another. During the six weeks of the survey, approximately 2,900 cases of gonorrhea were treated with penicillin, and over 3,000 cases of infectious or potentially infectious syphilis were treated.

The question of whether such a drive is of real value in controlling the venereal diseases will not be settled until all of the costs involved and the results obtained are balanced against each other and compared with other methods of control. It seems, however, that with modifications such a program of case finding and treatment of syphilis will be very successful.

Recreation Plant

(*Continued from page 71*)

be had at popular prices. There is an orchestra for dancing. The dance hall, night club, and bar are run with a strict eye towards total prohibition to those who show signs of having imbibed beyond their capacity. There is total prohibition on Sunday, although the bars in Sarasota are open that day from three to eleven P.M.

Although the Lido is a purely Sarasotan institution, it caters to a territory within a radius of 100 miles of the city. In the good old Floridan tradition it operates 365 days a year, and thus it has year-round appeal denied by Nature to its northern counterparts. Its daily intake is 2,000 people while its Sunday average is 10,000. Thus about 1,000,000 people visit and enjoy the Lido annually.

Lido is an outstanding example of municipally owned and managed recreational installation which not only brings health and happiness to citizens and visitors but is a source of income for the city treasury.

Data on Police Radio, Organized Municipal Employees, and City Planning Agencies

(Tables reprinted by permission of the International City Managers' Association, publisher of The Municipal Yearbook, reviewed on page 129 of this issue.)

TYPE OF POLICE RADIO FACILITIES FOR CITIES OVER 10,000 POPULATION: 1945

Population Group	No. of Cities Reporting	No. Having One-way Radio Cars Only		No. Having Two-way Radio Cars Only		No. Having Both 1-and 2-way Radio Cars		Total No. Cities Having Radio Cars		Cities Having Motorcycles			
										Total		With Radio	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Cities over 500,000	14	0	0.0	1	7.2	13	92.9	14	100.0	14	100.0	8	57.1
250,000 to 500,000	21	0	0.0	3	14.3	18	85.7	21	100.0	20	95.2	15	75.0
100,000 to 250,000	55	2	3.7	18	32.7	34	61.8	54	98.2	54	98.2	32	59.9
50,000 to 100,000	102	6	5.9	50	49.0	39	38.2	95	93.1	97	95.1	49	50.0
25,000 to 50,000	209	8	3.8	139	66.5	54	25.9	201	96.2	177	84.7	98	55.0
10,000 to 25,000	636	107	16.8	299	47.0	119	18.7	525	82.5	365	57.4	136	37.0
All Cities over 10,000	1 037	123	11.8	510	49.2	277	26.8	910	87.8	727	70.1	338	46.0

ORGANIZATIONS OF LOCAL EMPLOYEES IN CITIES OVER 10,000: JANUARY 1, 1945

Population Group	No. of Cities in Group	Cities with Employees in One or More Organizations		No. Cities Having Employees in Affiliated Organizations[1]						No. of Cities with Nonaffil. Org'an	No. of Cities with Written Agreements
		No.	Per Cent	AFSCME	SCMWA	IAFF	FOP	NJCSA	NYCSA		
Cities over 500,000	14	14	100.0	11	13	14	4	0	11	11	3
250,000 to 500,000	23	20	86.9	11	5	17	4	1	9	9	1
100,000 to 250,000	55	53	96.1	33	9	39	14	4	21	21	2
50,000 to 100,000	106	95	89.0	38	13	86	26	5	18	18	9
25,000 to 50,000	212	170	80.1	68	23	152	42	10	32	32	6
10,000 to 25,000	662	269	40.6	60	21	189	92	16	33	33	33
All cities over 10,000	1,072	621	57.8	221	83	477	163	36	15	124	54

[1] The total number of cities with employees in the several affiliated organizations exceeds the total number of cities having one or more organizations because there are many cities having employees in two or more organizations. AFSCME indicates American Federation of State, County, and Municipal Employees; SCMWA, State, County, and Municipal Workers of America; IAFF, International Association of Fire Fighters; FOP, Fraternal Order of Police; NJCSA, New Jersey Civil Service Association; NYCSA, New York Civil Service Association.

CITY PLANNING DATA FOR CITIES OF OVER 10,000 POPULATION

Population Group	No. of Cities in Group	No. of Reporting Cities*	Type of Planning Agency No. of Cities			Agencies Having Full-Time Employees	Agencies Having Only Part-Time Employees	Reporting Expenditure of $1,000	With Comprehensive Plans in Process	With Comprehensive Zoning	Outside Subdivision Control	Participating in Regional Planning
			Official Body	Unofficial Only	None							
Over 500,000	14	14	14	0	0	12	0	12	13	14	1	14
250,000 to 500,000	23	22	22	0	0	17	0	18	20	22	8	19
100,000 to 250,000	55	53	45	8	0	22	7	29	48	44	23	24
50,000 to 100,000	107	102	74	18	10	19	16	24	74	80	28	43
25,000 to 50,000	213	212	153	34	25	12	28	24	145	147	38	57
10,000 to 25,000	662	500	230	168	102	7	33	20	320	297	56	117
All over 10,000	1,072	903	538	228	137	89	86	124	620	604	154	274

*Included in this column are all cities reporting any of the data shown in the several columns of this table; many did not report on every item.

This "Caterpillar" Diesel D17000 Engine, operating as an electric set, furnishes two-thirds of the light and power for the village of Trenton, Neb. Runs 10 to 18 hours a day on 5 gals. of 5½c fuel per hour.

A community has unmistakable "growing pains" when its citizens get together to establish its own light-and-power plant. And the undertaking is ever so much easier and less costly than in the B.C.D. days (Before "Caterpillar" Diesel).

Considering the low electricity rates an economically operating "Caterpillar" Diesel Engine or Electric Set makes possible, it doesn't take long to "clear off the mortgage" on a power station that will keep going for many years at very small maintenance expense.

In the first place, "Caterpillar" Diesels are so simple, and require so little attention, that they virtually "take care of themselves." They have absolutely no operating adjustments; and lubrication change is usually the only servicing they require during long stretches of 24-hour running. When, eventually, some "going over" is desirable — or a few of the harder-working parts show need of replacement — there's a "Caterpillar" service-dealer near who has the experience and facilities to do the job efficiently and at reasonable cost.

Fuel costs are almost unbelievably low. With the exclusive "Caterpillar"-designed fuel system, these rugged, carefully engineered engines readily burn inexpensive low-grade fuels — and do it so efficiently that practically every drop is converted into useful piston-driving energy.

If your community needs power for an electric plant or waterworks, your "Caterpillar" dealer has some facts and figures you can't afford to miss.

CATERPILLAR TRACTOR CO. • PEORIA, ILLINOIS

CATERPILLAR DIESEL ENGINES

REG. U.S. PAT. OFF.

TRACTORS • MOTOR GRADERS • EARTHMOVING EQUIPMENT

The discharged veteran wears this emblem. Remember his service and honor him.

Municipal and Civic Publications

Bibliography for Small Communities

PUBLICATIONS FOR THE SMALL MUNICIPALITY.—*Special Bulletin BB, Municipal Finance Officers Association, 1313 E. 60th St., Chicago 37, Ill. June 1945. 4 pp. 25 cents.*

References to material prepared especially for small municipalities, covering general text on government, general accounting, assessment and appraisal, budgeting, debt, financial data, fire department, gambling, garbage disposal, health, hospitals, housing, ordinances, pensions, personnel, planning and zoning, purchasing records, recreation, tax collection, traffic, and utilities.

Medical Care in the United States

HEALTH CARE FOR AMERICANS.—*By C.-E. A. Winslow. Public Affairs Pamphlet No. 104. Public Affairs Committee, Inc., 30 Rockefeller Plaza, New York 20, N. Y. 1945. 32 pp. 10 cents.*

What kind of health program do we need? C.-E. A. Winslow is one of those who believe that medical care in this country is inadequate, and that only through a unified national program can good standards be achieved. This exposition is based on a number of medical surveys, including "Principles of a Nation-wide Health Program," the Report of the Health Program Conference (1944): "Medical Care in a National Health Program," an official statement of the American Public Health Association adopted October 4, 1944; and the Final Report of the Committee on the Costs of Medical Care (1932). He discusses the Blue Cross Plan for Hospital Care, the Wagner-Murray-Dingell Bill, compulsory insurance results here and abroad, state medicine, and other efforts to distribute medical costs in the United States.

Progress at the Idlewild Airport

MUNICIPAL AIRPORT AT IDLEWILD.—*Department of Marine and Aviation, City of New York. April, 1945. Illus. 24 pp.*

A descriptive report on New York's Idlewild Airport which embraces 4,527 acres at the head of Jamaica Bay, and is estimated to cost $71,000,000. Construction is now nearing the end of its first stage, and it is expected that the third stage will be under way by 1950, when a total of twelve runways will be available. By 1947, according to plans, the airport will have its six principal runways, complete taxiway system, and a permanent administration building, hangars, and other necessary facilities.

Housing for the People

BUILDING A GREATER ATLANTA: REPORT OF THE ATLANTA HOUSING AUTHORITY FOR THE YEARS 1943 AND 1944.—*Housing Authority of the City of Atlanta, Trust Company of Georgia Building, Atlanta, Ga. Illus. 31 pp.*

Atlanta's progress toward its goal of decent housing and surroundings for its people. "But," the report says, "life's meaning can not be calculated in terms of brick and mortar, statistics on rent, and sharp-pencil figuring about maintenance costs and return on investment. These things are important, of course, but dollars and cents cannot be employed to measure the human improvement you achieve when you lift a life—a young life especially—from squalor and social degradation into independent decency and self-respect." Atlanta's eight housing projects, described and pictured in this report, are administered with the "human side" in mind.

Municipal Government Information

THE MUNICIPAL YEAR BOOK, 1945.—*Clarence E. Ridley and Orin F. Nolting, Editors. International City Managers' Association, 1313 E. 60th St., Chicago 37, Ill. June 1945. 603 pp. $8.50 postpaid.*

The twelfth annual resumé of activities and statistical data of American cities, containing countless facts and statistics on individual city activities and analysis of trends by city population groups. Among the new features in the volume that reflect to some extent the changing emphases on municipal activities are certain data on municipal personnel adminstration, planning, and public health.

A significant new section shows important economic and social characteristics of each city over 10,000 population, including the major type of employment within the city—the amount of industrial activity as shown by the manufacturing ratio; and the relation between the number of people who live in the city and those who work there. Suburbs in metropolitan districts are classified as residential, employing, and balanced communities, and given rent level classifications.

Other new data include official post-1940 populations for some cities, number of suburban municipalities, and the number of units of local government in each metropolitan district, federal-city relations in 1944, relation of mayor to council, debt issued and retired in cities of over 25,000 population, refuse collection charges and sewer rentals, and traffic safety data. A notable section in this edition brings up to date the information on the classes of cities and forms of municipal government which last appeared in the 1938 *Year Book*.

In addition to these new data most of the regular features of the *Year Book* have been retained and brought up to date, including new sources of municipal revenue, typical utility bills, directories of city officials, model municipal ordinances, analysis of court decisions affecting cities, assessed valuations and tax rates, and fire and police activities.

(See page 127 of this issue)

Planning Your Airport

AIR TRANSPORTATION AND AIRPORTS.—*A Statement Prepared for Communities Interested in Airport Planning. By Fay, Spofford & Thorndike, Engineers, 11 Beacon St., Boston 8, Mass., or 420 Lexington Ave., New York 17, N. Y. 1945. 38 pp.*

"An airport project is a responsibility of the community," this firm of consulting engineers emphasizes in its discussion of airport planning, and makes suggestions for getting an airport project under way. It predicts the expansion that may be reasonably expected in aviation, discusses private flying activities, and discusses the relation of the federal government to air transportation. Included are three typical airport layouts.

Neighborhood Shopping Centers

PLANNING NEIGHBORHOOD SHOPPING CENTERS.—*By Marcel Villanueva, A.I.A., Planning Consultant. National Committee on Housing, Inc., 512 Fifth Ave., New York 18, N. Y. 1945. 35 pp. $1. 60c to NCH Members.*

A study which shows how potential purchasing power can be used as a yardstick in laying out shopping centers and determining the number and types of stores needed to serve a given population. It discusses new methods of preventing over-building, considers merchandising trends, transportation, need for re-zoning, variations of purchasing power according to income groups and neighborhood shopping center standards.

(See page 87 of this issue)

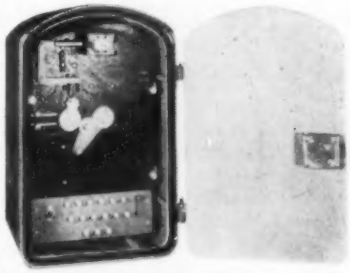
RENSSELAER Fire Hydrant...

Can easily be *serviced by one man* without the use of special tools or hoists.

RENSSELAER VALVE CO.
TROY N. Y.

TRAFFIC CONTROLS

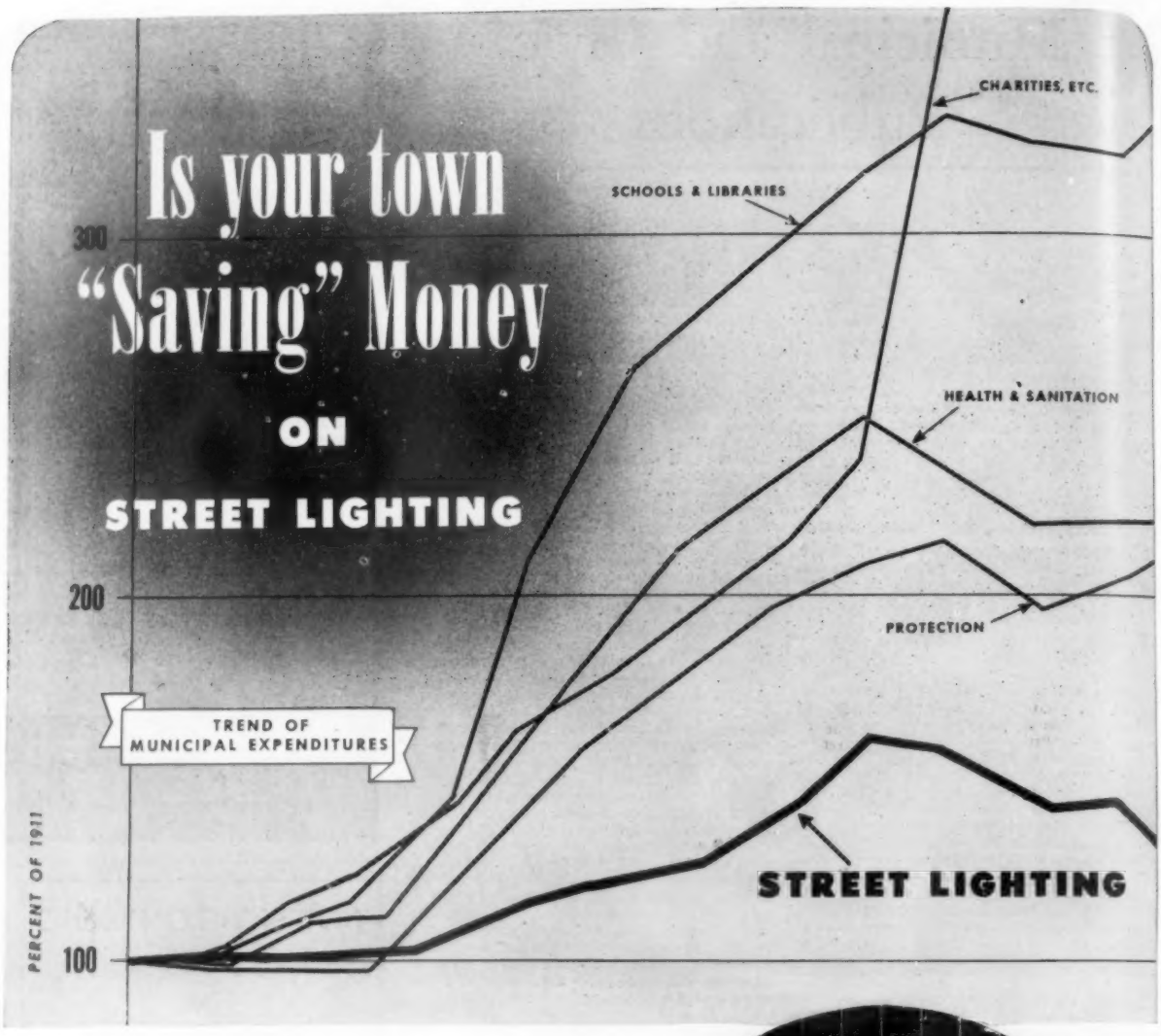
Designed and Manufactured to Standard or Individual Specifications



TYPE 99-RM5

Traffic signal controller, equipped for remote operations.

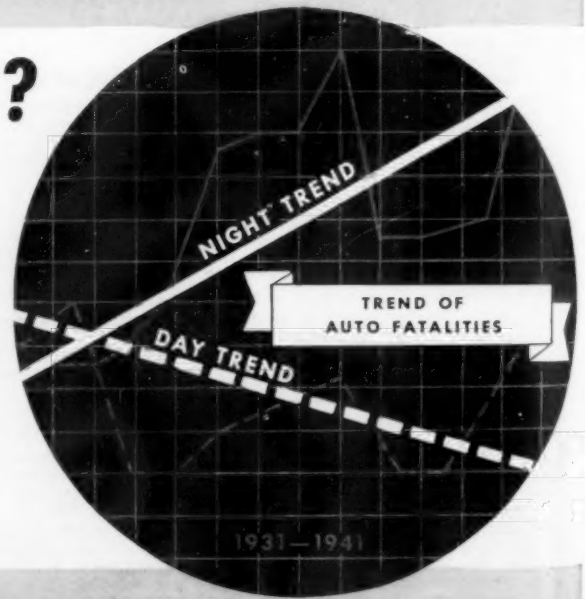
SOUTHERN SWITCH & SIGNAL COMPANY
Shreveport, Louisiana



—at the cost of HUMAN LIFE ?

PICTURED here are two charts—(1) the trend in municipal expenditures from 1911 to 1937, and (2) the trend in auto fatalities for the ten years immediately preceding the war. They've been placed together because, *together,* they emphasize an awful truth: too many American cities have been "economizing" on street lighting at the cost of human life and suffering.

Can this be said about your town? Better look around your streets tonight and see for yourself whether they're adequately lighted for postwar traffic. If not, get in touch with your electric utility company at once, ask its advice on improvements. Or write The Street and Traffic Safety Lighting Bureau, 155 East 44th St., New York 17, N. Y., for information on improvements other communities are planning.



GOOD STREET LIGHTING—THE SIGN OF A GOOD PLACE TO LIVE!

Financing and Planning Public Works

FINANCING LOCAL IMPROVEMENTS. *Bulletin No. 22.* 11 *pp.* $1.

ADVANCE ENGINEERING DESIGN AND THE OVER-ALL PLANNING FUNCTION: A SUMMARY OF PANELS ON POST-WAR PUBLIC WORKS. *Bulletin No. 23.* 45 *pp.* $1.

Issued by the American Public Works Association, 1313 E. 60th St., Chicago 37, Ill. 1945.

The first report presents a paper delivered by Carl H. Chatters, Executive Director of the Municipal Finance Officers' Association, before the Public Works Congress in September 1944, which outlines the principles involved in the financing of local public works improvement projects.

The second report consists of two panel discussions also held at the 1944 Public Works Congress: (1) a group discussion of the Over-All Planning Function, which includes comments by Edward J. Cleary, G. Donald Kennedy, Burton W. Marsh, George R. Thompson, Morris M. Cohn, George H. Herrold, and Herman E. Olson; and (2) a group discussion of Advance Engineering Design—A Summary of the Status of Actual Planning, in which Michael Baker, Jr., George M. Shepard, William E. Baldry, E. A. Fisher, and Mark B. Owen participated.

City Planning Demonstration Course

COMMUNITY PLANNING AND INTEGRATION IN ALLEGHENY COUNTY: A DEMONSTRATION COURSE IN COMMUNITY PLANNING.—*Carnegie Institute of Technology, Pittsburgh, Pa. 1944. 35 pp. plus numerous maps and plans.*

Results of a demonstration course in community planning which was conducted in the Evening School of Carnegie Institute of Technology in 1944. The course was attended by professionals in architecture, engineering, city planning, and other related fields of planning activity. The report includes a small portion of the course material. It includes also factual data, class exercises, and studies by the students for future development of the Borough of Sharpsburg.

Surplus Property Forms Available

PROCEDURE FOR PROCESSING AND FILING SURPLUS PROPERTY BOARD FORM 7. *Bulletin No. 14. June 1945. 6 pp.*

LIST OF SURPLUS PROPERTY. 28 *pp.*

National Institute of Governmental Purchasing Inc., 730 Jackson Pl., N. W., Washington 6, D. C. Free of charge to governmental buying agencies.

Available to governmental buying agencies for the filing of their estimates of requirements in the exercise of their priorities under Regulation 2 of the Surplus Property Board correctly and promptly.

Freedom Redefined

FREEDOM IS MORE THAN A WORD.—*By Marshall Field. University of Chicago Press, Chicago, Ill. 1945. 190 pp. $2.50.*

One prerequisite to the development of democracy and freedom is "access to facts," and it is the one with which Marshall Field has been chiefly concerned. This book tells the story of the founding of New York's newspaper *PM*, of the obstacles encountered in establishing the *Chicago Sun*, and of the author's fight against the Associated Press, in which he has been vindicated in a recent Supreme Court decision.

"Freedom Is More Than a Word" is an attempt to analyze the weakness and strength of American institutions, and to interpret America's unique position among the nations in balancing individual and cooperative goals. Most of all, this book is a challenge to the American people to live up to the liberalism of their heritage to "keep America and the world on their course toward greater opportunities for greater numbers of people."

Recreation Data

TABLES OF COMMUNITY RECREATION STATISTICS—1944.—*In July 1945 issue of* Recreation, *315 Fourth Avenue, New York 10, N. Y. 24 pp. 50c.*

Gives information for cities in the United States, Canada, and Hawaii, indicating for each the recreation managing authority, the number of paid recreation leaders, volunteer workers, playgrounds under leadership; the number of buildings and indoor centers, bathing beaches, day camps, 9- and 18-hole golf courses, indoor and outdoor swiming pools; expenditures of the last fiscal year, and source of financial support.

British Post-War Reports in Maps

MAPS FOR THE NATIONAL PLAN: A BACKGROUND TO THE BARLOW REPORT, THE SCOTT REPORT, THE BEVERIDGE REPORT.—*Prepared by the Association for Planning and Regional Reconstruction. Percy Lund Humphries & Co. Ltd., London, Eng. Can be ordered through Holliday Bookshop, 49 E. 49th St., New York 17, N. Y., March 1, 1945. 119 pp. $5.75.*

A series of maps, 8 x 13 inches in size, devised as a background for discussion and criticism of plans for post-war reconstruction in Great Britain. Passages selected from the text of the Barlow, Scott and Beveridge Reports (and, in one case, from the White Paper on Educational Reconstruction) are quoted opposite each map. Most of the information which is mapped was derived from government publications and other official sources during the war years by the Association for Planning and Regional Reconstruction, a group of men and women from many professions. The Association believes that, as a prerequisite to sound planning, a background of fact must be made available to all concerned—to the planner, that his work may be balanced and coherent, to the general public, that their criticism may be intelligent, constructive and informed.

WATER MAIN DISINFECTION

We provide chemicals, equipment and experienced operator ready to serve you within 200 miles of Washington, D. C.

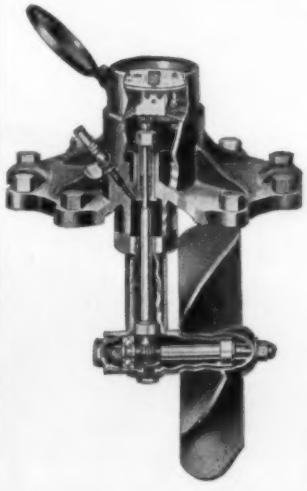
Write us for information

LUTHER and WOOD

310 Chandler Bldg., Wash. 5, D.C.

Phone NA. 2123

SPARLING MAIN-LINE METERS



THE SPARLING Meter is as direct in action as are the meters used on consumer lines. The flowing water actuates the Totalizer mounted on the meterhead!

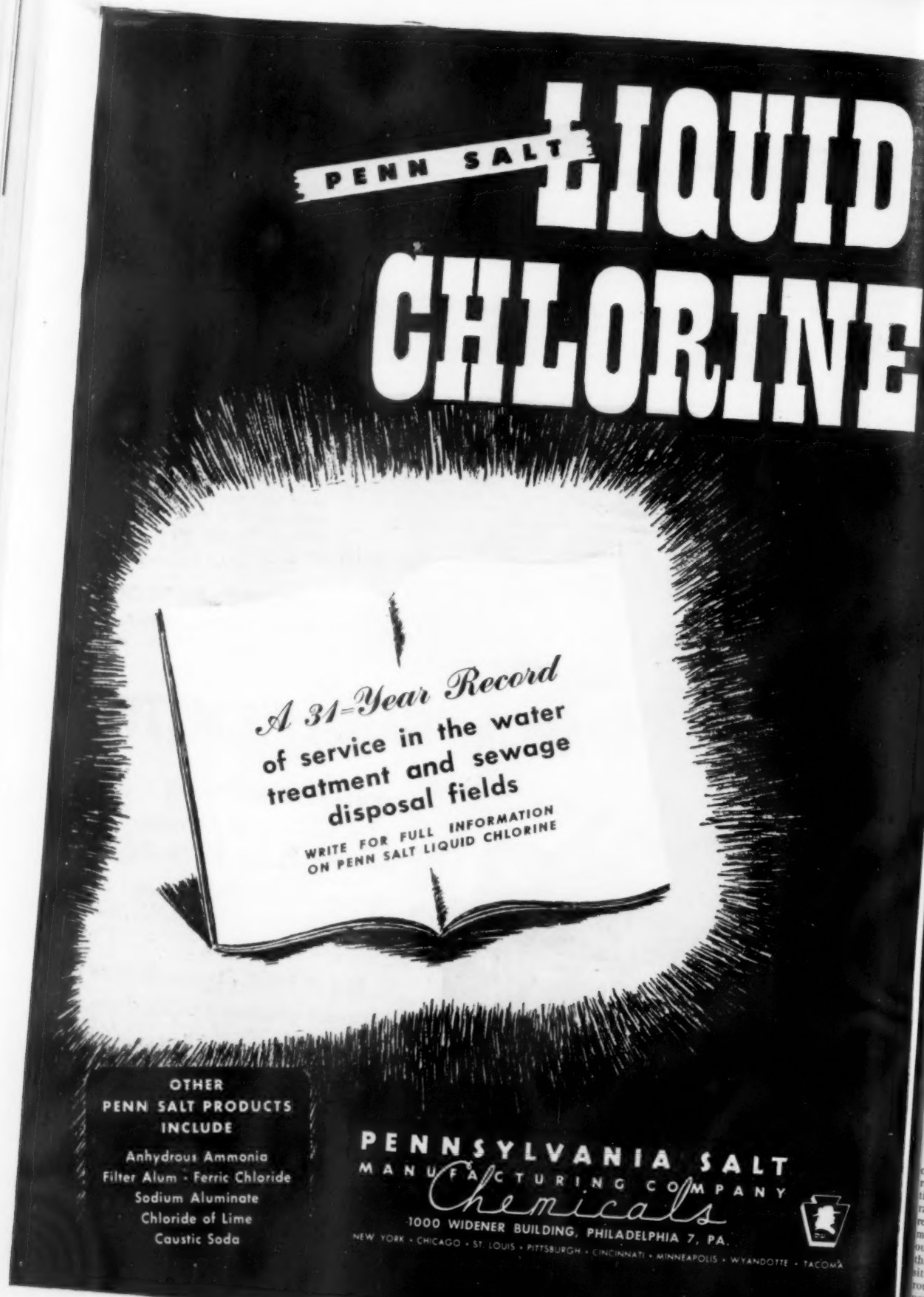
Easy to install. Lowest pressure loss. Accuracy guaranteed within 2 per cent over a wide range of flows.

Ample "power" to operate Indicator, Recorder and Controls from meterhead.

Bulletin 308 comes on request

P. W. SPARLING *Manufacturer of Water Measuring Equipment*

LOS ANGELES 54...Box 3277 Terminal Annex — 622 Broadway ... CINCINNATI 2
CHICAGO 16...3104 South Michigan Ave. — 101 Park Avenue ... NEW YORK 17
BOSTON 8...6 Beacon Street


PENN SALT
LIQUID CHLORINE
A 31-Year Record
of service in the water treatment and sewage disposal fields
WRITE FOR FULL INFORMATION ON PENN SALT LIQUID CHLORINE
OTHER PENN SALT PRODUCTS INCLUDE
Anhydrous Ammonia
Filter Alum - Ferric Chloride
Sodium Aluminate
Chloride of Lime
Caustic Soda
PENNSYLVANIA SALT MANUFACTURING COMPANY
Chemicals
1000 WIDENER BUILDING, PHILADELPHIA 7, PA.
NEW YORK • CHICAGO • ST. LOUIS • PITTSBURGH • CINCINNATI • MINNEAPOLIS • WYANDOTTE • TACOMA

Water Supply Needs Met in Honolulu

TENTH BIENNIAL REPORT OF THE BOARD OF WATER SUPPLY 1943-1944.—*City and County of Honolulu. Honolulu, Hawaii. January 1945.* 186 *pp.*

This report covers the work, activities, financial statements, and statistical data of the Honolulu Water System for 1943 and 1944, as well as recommendations and proposed plans for enlargement and improvement of the system. During these two years greatly augmented demands have been made upon the facilities of the water system because of the many new military installations and the unprecedented increase in military and civilian population within the city. However, Honolulu has been able to furnish the city with an adequate supply of potable water without interruption because of the ability of the Board of Water Supply to maintain an up-to-date distribution system with a reasonable margin of safety for normal peacetime expansion and increased demands, and also due to the emergency preparedness measures taken before the war.

Housing South of the Border

LOW-COST HOUSING IN LATIN AMERICA.—*By Robert C. Jones. Pan-American Union, Division of Labor and Social Information, Washington, D. C., October* 1943. *Illus.* 20 pp. *Mimeo.*

A short summary of the more important activities relating to low-cost housing in some Latin American countries. The author of this brochure points out that a substantial part of the general program to raise the standard of living in Latin America must be concerned with the establishment of low-cost housing facilities in rural and urban areas. Included are photographs of some low-rental dwelling units.

Challenge to Communities to Provide Better Housing

HOUSING: A COMMUNITY JOB.—*National Housing Agency. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington* 25, *D. C. June* 1945. 11 *pp.* 5c.

"What citizens can do to make their communities better places for living." This pamphlet outlines the ways to go about expanding building activity so that the entire community will benefit, and warns of the consequences of a reckless building boom unrelated to community needs. It strongly advocates comprehensive plans for communities, incorporating their housing needs and goals, as well as effective citizens' organizations. As one of the most immediate problems, it points to the need for housing for returning servicemen and women and their families.

(See page 105 of this issue)

Public Recreation Plan for Fort Wayne

LONG-RANGE RECREATION PLAN.—*Prepared for the City of Fort Wayne, Ind., by the National Recreation Association,* 315 *Fourth Ave., New York* 10, *N. Y. Illus.* 1944. 67 *pp.* $1.

At the request of a citizens' recreation study commission of Fort Wayne, the National Recreation Association has surveyed the recreational system of the city and developed a long-range program in accordance with modern recreation standards. It is intended that the major recommendations of the plan be carried out during the next quarter of a century and that the planning of sufficient property acquisition and development will insure a well-rounded program during and beyond that period. This comprehensive study should be of special interest to cities of the size of Fort Wayne which has a population of approximately 125,000.

Other Reports Received

BERGEN COUNTY, N. J.—*Annual Report of Progress*—1944. County of Bergen, Hackensack, N. J. January 1945. Mimeo. 12 pp.

CHICAGO, ILL.—Annual Report of the Treasurer for the Fiscal and Calendar Year 1944. Raymond Drymalski, City Treasurer. March 1945. 41 pp. Copies may be obtained from the Municipal Reference Library, 1005 City Hall, Chicago 2, Ill. 3c postage to cover cost of mailing.

EAST HARTFORD, CONN.—*The Three R's of Your Town Government.* Annual Report for the Fiscal Year Ended September 30, 1944. 107 pp.

EATON, PA.—58th Annual Report for the Fiscal Year 1944. 89 pp.

MILWAUKEE COUNTY, WIS.—1944 Financial Summary. Compiled by George F. Breitbach, County Clerk, and Frank Bittner, County Auditor. 86 pp.

NEW ULM, MINN.—Annual Consolidated Financial Statement of the City of New Ulm and Public Utilities Commission for the Fiscal Year Ending Feb. 28, 1945. 32 pp.

NEWARK, N. J.—*The Newark Public Library's New Position Classification and Pay Plan.* Supplement to the June 1945 issue of *NPL News.* 68 pp.

RHODE ISLAND.—*Comparative Analysis of Local Government Finance in Rhode Island.* Rhode Island Public Expenditure Council. June 1945. 8 pp.

SAN FRANCISCO, CALIF.—Annual Report of the Controller of the City and County of San Francisco for the Fiscal Year Ended June 30, 1944. 161 pp.

WASHINGTON.—*Officials of Washington Cities.*—Published by Belle Reeves, Secretary of State, in cooperation with Association of Washington Cities and Bureau of Governmental Research, University of Washington. Olympia, Wash. May 1945. 32 pp.

REPORT TO MEMBERS AND FRIENDS—1945.—Connecticut Public Expenditure Council, Inc. 21 Lewis St., Hartford 3, Conn. 27 pp.

Stop Your Leaks • Save Water and Steam

The Ear That Locates Underground Leaks

GLOBE GEOPHONE

Locates leaks in water, air, and steam pipes quickly and accurately.

SEND FOR FOLDER AND MORE DATA

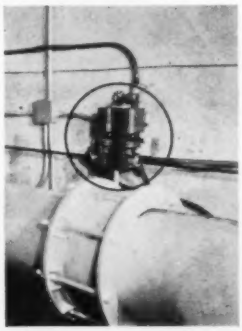
Many times the Geophone on one leak alone saves more than the cost of the instrument. Successfully used for 25 years by many Water Systems, Industrial Plants, and U. S. Government Plants.

No water system, industrial plant, institution having underground piping, water, air, or steam, can afford to be without a Globe Geophone in their Maintenance Department. One Water Service Company has over 35 Globe Geophones in use in their various systems. The Globe Geophone is a time and money saver. It conserves water and steam.

Price Complete with Leather Covered Carrying Case and Shoulder Strap... $75.00

For descriptive folder and more detailed data write:

GLOBE PHONE MFG. CORP.
Department H, Reading, Mass.



ELECTRO - HYDRAULIC VALVE CONTROLLERS

Remote Control or Automatic Operation

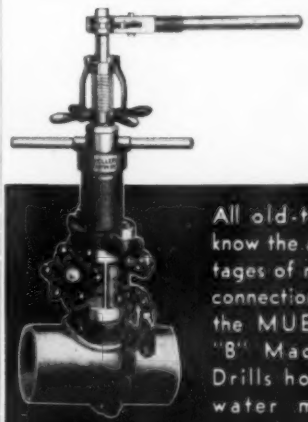
Air or Water

Handle All Operating Jobs

BENTON HARBOR ENGINEERING WORKS

P. O. Box 612—307 E. Main
Benton Harbor Michigan

Saves time



All old-timers know the advantages of making connections with the MUELLER "B" Machine. Drills holes in water mains, taps them, and inserts or removes corporation stops. All under pressure, too! No water shut-off, no trouble, no muss. Saves time also. Your men will like it. They can make better connections. Sizes ½" to 1" inclusive. . . . Write us today.

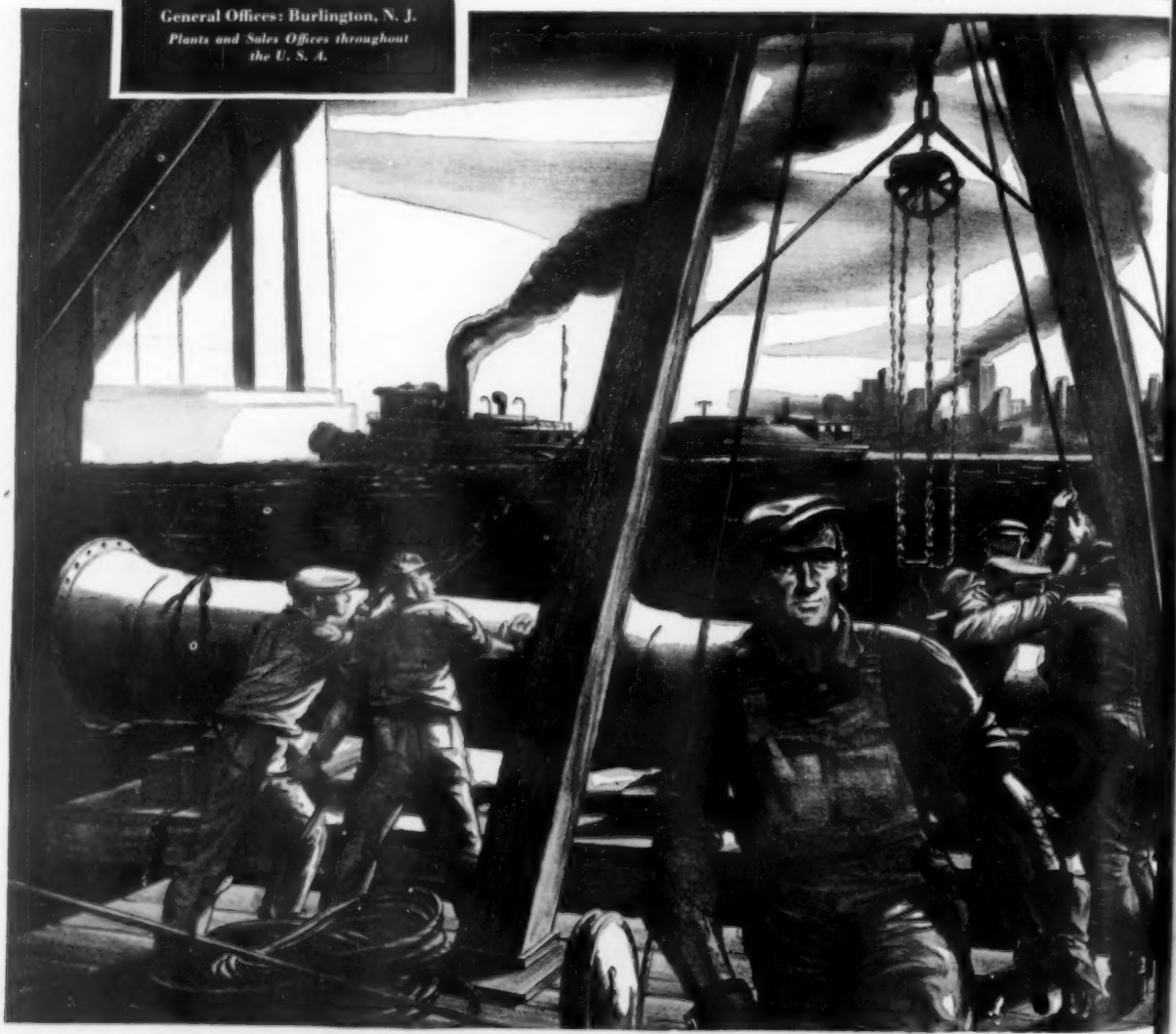
MUELLER CO. FOUNDED 1857
DECATUR 70, ILL. LOS ANGELES 23, CALIF.

Behind the products of this Company is over forty years of engineering experience covering designs for installations in all fields of pressure pipe service. With this experience are coupled the resources of our modern research laboratory for the development of new and improved practice in the production and utilization of cast iron pipe and fittings. If you have a pipe design problem, feel free to draw on the experience and "know how" of our technical staff, without obligation.

U.S.
cast iron
PIPE

U. S. PIPE & FOUNDRY CO.
General Offices: Burlington, N. J.
Plants and Sales Offices throughout the U. S. A.

Lithographed on stone by Edward A. Wilson



News and Illustrations

Items of Interest to City, Town and County Officials and Others Concerned with the Economical Construction and Efficient Operation of Public Improvement Undertakings

"Larry" Tompkins

Well-Known Parking Meter Salesman Joins Rhodes Organization

A significant event in the parking meter field occurred recently when "Larry" Tompkins, nationally known parking meter salesman, joined M. H. Rhodes, Inc., 30 Batholomew Ave., Hartford 6, Conn., as Vice-President and Sales Manager.

In this highly competitive field Mr. Tompkins has sold over 10,000 meters costing more than a half million dollars, said to be more than any other individual in this industry. Now, after looking into Rhodes manual parking meter —the New Perfection—Mr. Tompkins' taking over this model is a splendid endorsement of Mark Rhodes' continued progress in the parking meter industry. Coming from the man who, after the keenest competition, succeeded in selling the largest single order for meters—to the city of Cleveland, Ohio, 4,400 meters—the Rhodes Company feels highly complimented with this acquisition of Mr. Tompkins' service.

"Larry" Tompkins will now devote the skill and experience he has acquired throughout many years of activity to one single end—the distribution of Rhodes Perfection manual parking meters. Mr. Tompkins says, "I have long been an automatic meter enthusiast, my wife being the daughter-in-law of Carl Magee, inventor of the automatic parking meter. Ten years ago last July 16, the first Carl Magee meter was installed in Oklahoma City, Okla. Though coming east with much skepticism to look at the Rhodes latest model, I returned to the west firmly convinced that Mark Rhodes has developed a new parking meter which is outstanding in every respect. Rhodes business and inventive career has been a long and eventful one and it can truthfully be said that the Perfection parking meter is the meter with a pedigree. What makes Rhodes a master builder of timing devices is his audacity of invention. I expect to see huge production and sale of these meters very soon."

"Larry" Tompkins received his mechanical engineering degree from the Case School of Applied Science. During 1928 and 1929 he toured the European continent, returning to enter the consumer goods field of electrical appliances. It was while in this field of endeavor he became interested in parking meters and decided to devote his entire attention to developing the universal use of this improved method of parking in communities where parking is a problem.

Yeomans Appoints Oregon Representative

R. M. Wade and Co., Portland, Ore., has been appointed to represent Yeomans Brothers Co., 1433 N. Dayton St., Chicago 22, Ill., in Oregon and southwest Washington. Wade Newbegin is President of this organization and H. D. Smith is Manager of the Pump Department.

Activities of Wade and Co. include manufacture, sales and distribution of agricultural implements, pumping equipment, irrigation and water supply systems, and other machinery. They will now handle the complete Yeomans line of sewage, drainage, and horizontal pumps, condensate return units, rotary air compressors, vacuum pumps and gas boosters, and sewage treatment equipment.

The Pump Division of the Wade Company has been expanded to include a large staff of competent pump specialists and a complete pump service department to install or service any pumping equipment.

Clifford S. Strike to Aid in Rebuilding Germany

Appointment of Clifford S. Strike, President of F. H. McGraw & Co., engineers and contractors, 51 E. 42nd St., New York, N. Y., as Chief of Building Materials and Housing branch of the Economics Division of the United States Group Control Council for Germany was announced last month. While retaining civilian status, Mr. Strike will be credited to the staff of Lieut. Gen. Lucius D. Clay, deputy military governor under General Dwight D. Eisenhower.

Before leaving for Germany, Mr. Strike said that his primary concern would be the erection of living quarters for 11,000,000 homeless Germans in the American zone of occupation. All materials, money, and labor involved in the reconstruction will come from Germany and it is estimated the task will require the labor of from 2,000,000 to 2,250,000 Germans.

During Mr. Strike's absence in Germany, Rodman B. Doremus, who was recently promoted from Vice-President to Executive Vice-President, will function as President of F. H. McGraw.

Harold S. Buttenheim (right) editor of THE AMERICAN CITY, *interviewing Clifford S. Strike, of the F. H. McGraw & Co., at a press conference at the Engineers' Club.*

"Hey, Mister! What happened?"

The answer too often is the same, once you get a few miles back from main highways.

You hit a hole, blow a tire, break an axle . . . or worse. Ask any farmer. He'll tell you how rough, dangerous roads cost him money . . . disrupt the nation's food distribution system.

America's network of farm-to-market highways needs attention—and needs it badly. Less than 50 per cent of them have any surfacing whatever. And the cost of improving these roads is relatively low With Barrett Tarvia, often as many as 40 miles of secondary roads can be re-built for what it costs to build one mile of super-highway.

* * *

Why not consult with the Tarvia field man? He can be a real help on your current and post-war road problems.

The above is quoted from a Barrett Tarvia advertisement in The Saturday Evening Post.

THE BARRETT DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y.

New York • Chicago • Birmingham • St. Louis • Detroit Philadelphia • Boston • Providence • Rochester • Minneapolis Cleveland • Columbus • Toledo • Youngstown • Syracuse Buffalo • Cincinnati • Bethlehem • Portland, Me. • Bangor, Me. • Norwood, N. Y. • Oneonta, N. Y. • Cromwell, Conn. Norwich, Conn. • Savannah, Ga. • Norfolk, Va. In Canada: THE BARRETT COMPANY, LTD., Montreal, Toronto, Winnipeg, Vancouver.

Barrett Tarvia*
*Reg. U. S. Pat. Off.

The Meter That Parks Two Cars

One day Louis F. Fink, a parking meter salesman, got a telling view of the meters on State Street, Albany, N. Y., and it told him that the "picket fence effect" might be greatly reduced by a new departure in meter design.

One stanchion supports two meters.

From this "flash" there evolved the new "Twin" or Plural Space Parking Meter introduced by International Meters, Inc., 41 E. 42nd St., New York 17, N. Y. Perfected, and patents applied for, the new meter was ready to go when Pearl Harbor intervened. The years between have been used to make further improvement, prosecute the patents applications, and plan for postwar distribution and installation.

It's an automatic meter. Though a "Twin," it is just one meter in a single housing with *one* clock mechanism to control the parking time of two adjoining cars independently of each other. It has two separate dials, showing 60 minutes each, one for each car, right and left. As one meter on one stanchion is required for every pair of cars, spacing on the sidewalk between "Twins" is 20 feet for angular parking and 40 feet for parallel parking.

Cold Lime-Soda Water Softener

The Spiractor, a cold lime-soda water softener for water treatment embodying a revolutionary new softening principle, is a product of The Permutit Co., 330 W. 42nd St., New York, N. Y.

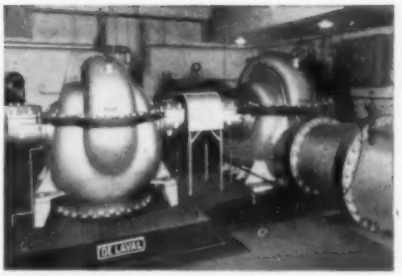
The design consists of a conical steel shell which is partially filled with a granular catalyst screened to the proper grain size. Raw water and the usual chemicals are introduced at the lower extremity of the cone through separate inlets. The tangential direction of these inlets plus the shape of the shell impart a spiral motion to the incoming water and chemicals, thus assuring thorough mixing of the water and chemicals with the catalyst. As the water rises, its velocity at the inlet is gradually reduced through a continuously increasing cross-sectional area. Since suspension of the granules of catalyst requires a certain upward velocity of flow, a point is reached where the velocity is no longer sufficient to suspend the catalyst. The water has lost its turbulent motion and thus rises to the outlet soft and clarified.

Among the advantages of the Spiractor listed by the company are the following: its rapid action permits use of a small sized unit; it is readily adjustable to changes in the character of the water; by using a pressure cone, repumping may be eliminated; it has no moving parts, because all agitation is accomplished by the upward flow of the water; there is no sludge handling.

New Distributors for Peerless Pump Division

Uhrich Supply Co., North Kansas City, Mo., has been appointed distributor in the Kansas-Missouri area of the vertical and horizontal pumps of the Peerless Pump Division of Food Machinery Corporation,, 301 W. Avenue 26, Los Angeles 31, Calif. They succeed Butters Equipment & Supply Company, which is retiring from business. C. H. Pratt is Manager of Uhrich Co.

C. H. Pratt



HOW ONE WATER SUPPLY PUMPS ANOTHER SUPPLY

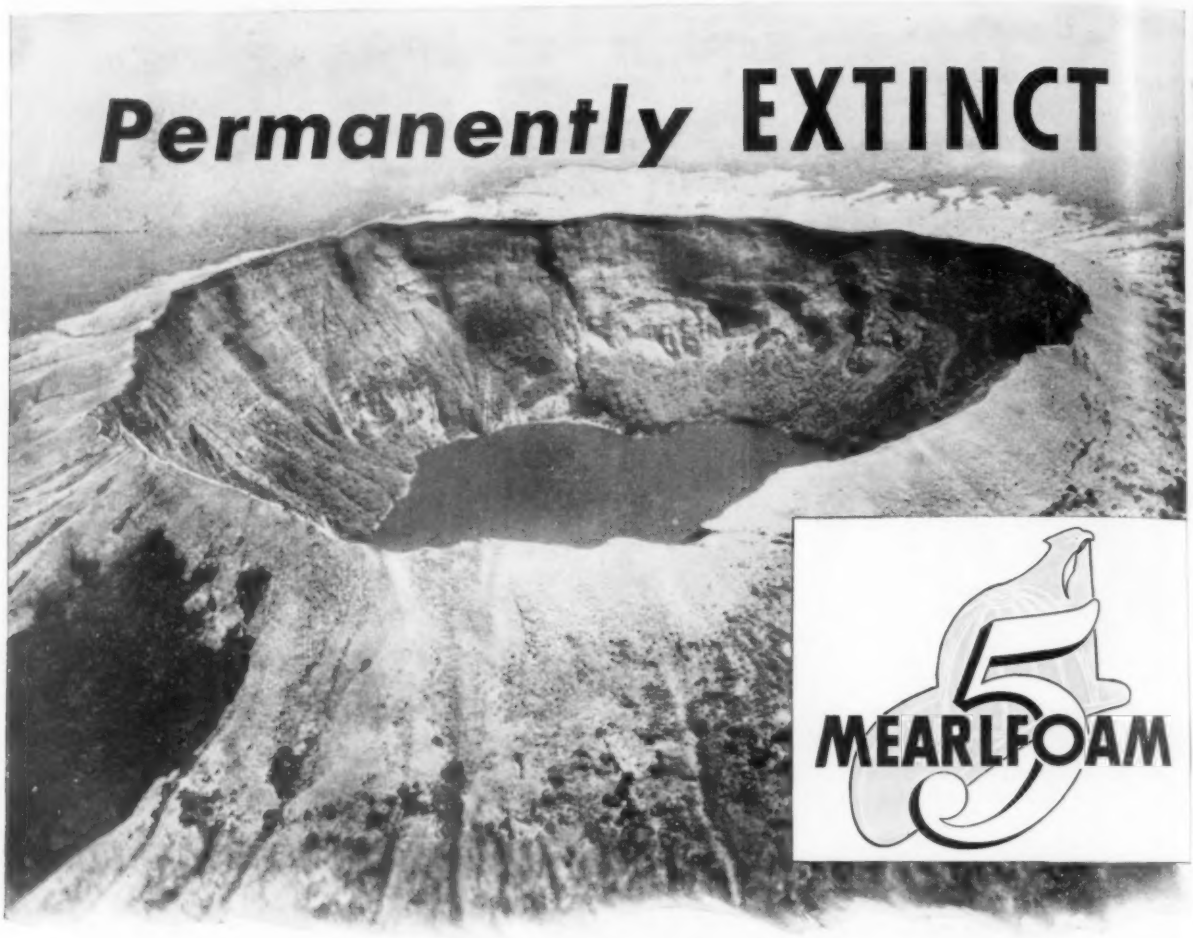
At full capacity, the De Laval water turbine at the right, receiving 20,800 g.p.m. of Catskill water under 210-ft. head and discharging to its distribution system against 120-ft. head, drives the De Laval pump at the left operating at 560 r.p.m., which delivers 21,000 g.p.m. of Croton water to its distribution system against 100-ft. head. The positive head at the suction nozzle is 35 ft.

The speed of the unit is automatically regulated.

De Laval Engineers will gladly help in solving your pumping problems.

DE LAVAL STEAM TURBINE CO.
TRENTON 2, NEW JERSEY

MUNICIPAL SUPPLY COMPANY
Manufacturers
Street Sweepers
Street Flushers
Bituminous Distributors
SOUTH BEND 23, INDIANA
EXPORT DEPARTMENT, 44 Whitehall Street, NEW YORK 4, N. Y., U. S. A.



WHEN TRAVEL was in full swing, tourists came from all over to walk around this once active crater. But this old fire-spouter went out years ago. It's cold and dead now . . . permanently dead . . . as safe to approach as a fire killed by MEARLFOAM-5, the war-born, blended multi-protein mechanical (air) foam.

Fire-fighters make the kill just once when dealing death to a terrific gasoline or oil fire—with MEARLFOAM-5. Then this stable, fire-resistant foam takes over and stands guard against re-ignition—prevents the flash-back which rekindles a blaze with all its former intensity.

This positive, anti-flashback factor of MEARLFOAM-5 permits fire-fighters to approach an extinguished fire with a great deal of personal security . . . confident that MEARLFOAM-5 which puts fire out fast—keeps fire out permanently.

The many unique and dependable properties of MEARLFOAM-5 are the sole reasons the U. S. Navy uses it extensively for preparedness . . . and for the quick extinguishment of raging gasoline and oil fires on shipboard and at shore bases. MEARLFOAM-5 is the veteran of many successful engagements, and one day will demonstrate to all—the super effectiveness of mechanical (air) foam as the most successful method for combatting gasoline and oil fires. MEARLFOAM-5, after putting fire out—*keeps it out* . . . totally eliminating the flashback hazard which in the past has taken such a terrible toll of lives and property.

MEARLFOAM-5 is a good-mixer—with any type of water: *sea water, fresh water, hard or soft water*. It works at maximum efficiency in any climate or atmospheric condition. Its performance is practically constant and invariable over a wide range of conditions. When split-seconds count—you can rely on MEARLFOAM-5 to put fire out fast—to keep fire out *permanently!*

A one-page condensed data sheet detailing the unique properties of this war-born fire-fighting foam is now available on request. Please ask for it.

Completely safe and non-corrosive—may be used with standard Mechanical Foam-Forming Equipment

FOAM ON FIRE OUT... Stays OUT!

THE MEARL CORPORATION
153 Waverly Place, New York 14, N.Y.

Style C-150 Fibrcan heavy-duty utility can now equipped with rubber wheels for easy mobility.

Rubber-Wheeled Fiber Receptacle for Maintenance Works

For maintenance work and the handling of materials, Fibrcan Corp., Whitestone, L. I., N. Y., has introduced a heavy-duty utility can equipped with rubber wheels to facilitate easy moving from place to place.

This "four-wheel skater" can is made of case hardened fiber, has steel reinforcements, with die-cut hand holes. It is available in 16-, 18-, and 20-inch diameters; 30- and 36-inch heights, weight capacity is approximately 400 pounds.

Literature is available illustrating and giving further details on this style No. C-150.

APCO-V-APCO PRIMERS

AUTOMATIC POWER OR TANK PRIMERS

AIR RELEASE VALVES

FOR FILTER PIPE LINES DISTRIBUTION LINES AND OTHER USES 17 TYPES

VALVE AND PRIMER CORPORATION

Room 366—111 W. Washington St. CHICAGO, ILL.

a Royer

Supplies Low Cost Compost for Elizabeth, New Jersey

The Royer Compost Shredder and Mixer pictured is used by the Union County Park Commission for the preparation of high grade top dressing for their golf course and park lawns. On occasion, it has been used to pulverize and mix materials for tennis courts. On every job, Royers save time and reduce labor costs. The model M-2 illustrated is belt driven from a tractor.

Many communities, with the aid of Royers, have been able to maintain their parks, golf courses and playgrounds despite the manpower shortage.

One man with a Royer can produce more and better compost than a sizeable gang by hand mixing. All that is needed is to shovel the compost materials into the hopper. The machine shreds, mixes and aerates in a single operation. It discharges readily assimilated compost that results in healthy lawns at minimum cost.

The Royer is available in models and sizes for every city — motor, gasoline engine or belt-to-tractor driven. Ask for Bulletin 440.

ROYER

PIONEER BUILDERS OF COMPOST SHREDDERS

ROYER FOUNDRY & MACHINE CO.

179 PRINGLE ST., KINGSTON, PA.

KARPARK *Automatic Operation*

Saves trouble all around

• From the public, from traffic officers and, yes, from the city treasury, there's a heavy vote in favor of Karpark Automatic Operation. It saves the motorist trouble and time—all that is necessary is to slide a coin in the slot and the meter starts. It saves trouble for traffic officers by eliminating disputes and complaints. With greater popularity there's greater use and with 100 percent enforcement there's greater revenue. Automatic Operation is another point of efficiency that makes Karpark *the wise choice.* A request will bring the whole KARPARK story.

KARPARK *Automatics*

KARPARK CORPORATION, CINCINNATI 6, OHIO

KARPARKS ARE MANUFACTURED BY THE HERSCHEDE HALL CLOCK CO.

CUSTOM-BUILT FIRE APPARATUS

BY

OREN

When you buy an OREN you get a dependable and modern fire truck built to meet the individual needs of your department and town . . . combining valuable features of both the customer and OREN engineered ideas.

Write for detailed specifications and catalog.

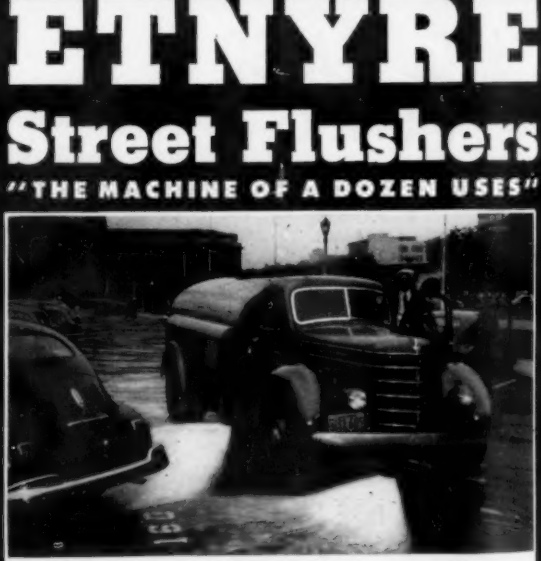
OREN FIRE APPARATUS CO.

ROANOKE, VIRGINIA

ETNYRE

Street Flushers

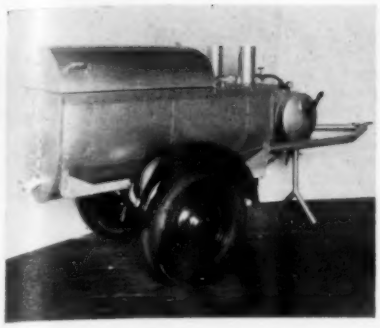
"THE MACHINE OF A DOZEN USES"



USED EVEN ON RAINY DAYS!

Flushing loose oil from streets for traffic safety during wet weather is one of many jobs Etnyre handles in San Francisco. Street Sup't. Bonson reports the Etnyre Flusher effectively cleans monuments and tunnel walls, too. Find out about the machine which cleans street thoroughly up to 42 feet wide in ONE TRIP, irrespective of parked cars. See your nearby Etnyre dealer or write us today.

E. D. ETNYRE & CO., Oregon, Illinois



Aeroil's high speed pneumatic-tired trailer kettle again being manufactured.

Pneumatic-Tired Kettles

The Heet-Master high speed pneumatic-tired trailer kettle is again being manufactured by Aeroil Products Co., West New York, N. J., for peacetime construction and maintenance work. These kettles are also available on steel wheels and skids and in several sizes ranging from thirty-gallon liquid capacity to 165 gallons. The pneumatic-tired model comes in four sizes at present: 55-gallon, 80-gallon, 110-gallon, and 165-gallon liquid dipping capacity.

The kettle is completely insulated and heated from the inside through a tube heating unit which can be removed easily for cleaning purposes. An unusual feature of the kettle is the oil burner which is actually inside the kettle and prevents waste heat and lowers fuel cost. The Heet-Master kettle eliminates waste time by melting tar, pitch, or asphalt on the way to the job.

Advertising Manager for G.E. Lamp Department

W. H. Robinson, Jr., has been named Manager of the Advertising Division of the Lamp Department of the General Electric Co., with headquarters at Nela Park, Cleveland, succeeding the late H. Freeman Barnes who previously directed lamp promotion and advertising.

W. H. Robinson, Jr.

Mr. Robinson has a twenty-year background of lamp and lighting experience. He joined the Street Lighting Division of General Electric at Lynn, Mass., in 1925 and was engaged in special lighting sales work until 1935 at Schenectady, New York, Chicago and Los Angeles. In 1935 he was appointed District Engineer for the G.E. Lamp Department's South Pacific Sales District at Los Angeles and in 1939 was advanced to the post of Assistant Manager of this district.

Transferred to Nela Park headquarters in 1942, he was put in charge of activities in the department's war program of conversion from lamp making to electronic tube production for radar and other military needs. Since May of this year he has been Sales Manager of electric discharge lamps.

Mr. Robinson has worked closely with members of the advertising and sales divisions in the formulation of wartime lighting programs. His contributions to activities devoted to wider and more intelligent use of G-E fluorescent lamps have been outstanding.

CAYO

ELECTRIC SEWER MACHINE

Protect your city residents from typhoid, diphtheria, infantile paralysis and other diseases caused by stagnant backwater sewage. Use the Cayo Machine for immediate relief of plugged sewer lines. Avoid danger of delay and costly digging and breaking of pavements.

The Practical Method to clean and maintain 4", 6", 8" & 10" lines.

WRITE FOR CATALOG AND PRICE

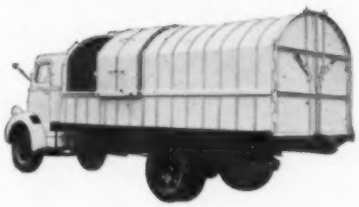
The Cayo machine is the product of over 10 years' research and practical experience in this field. Operators like it for its easy, thorough operation, its one minute assembly and break down.

SPECIAL SAFETY FEATURES

(1) The motor, when under stress, compresses safety support springs, allowing slippage of V belt. (2) Safety foot switch enables operator to work with both hands on cable at all times. Also eliminates necessity of a helper while operating.

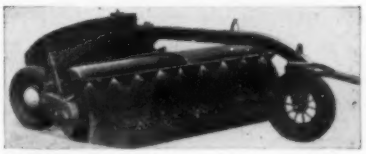
Cayo Electric Sewer Machine
Benton Harbor, Michigan

More Garbage In Less Space



More pickups per trip . . . fewer trips to the disposal area. W. E. Grace Garbage Truck Bodies are the most modern, economical bodies on the market. With a simple combination packing and dumping mechanism, the Grace Garbage Truck Body can be operated easily and without wasted motion. Mechanism pushes load out back, eliminating necessity of tilting body and extra work during dumping. New and improved model with water-tight bottom prevents disagreeable drippings.

LONG-LIFE SWEEPERS



Grace Sweepers with extra long-life bristles are available without priorities. Easily adjustable, Grace motor or 2-way axle-driven sweepers sweep a path 55 inches wide EXTRA clean . . . spreads evenly. Fast and economical.

Write today for full details.

W. E. GRACE Manufacturing Co.
6005 S. Lamar St. Dallas, Texas

INCINERATION ENGINEERS

NICHOLS ENGINEERING & RESEARCH CORPORATION

60 WALL TOWER NEW YORK, N. Y.

Consultants • Designers • Constructors

Cuts Sewage Carrying Costs— ALL ALONG THE LINE!

LOWER handling costs . . . faster assembly . . . less infiltration . . . high carrying capacity . . . these are some of the ways Transite Sewer Pipe provides important economies *all along the line*—in handling, installation and performance!

And here are the reasons why:

Long lengths, light weight. Transite Sewer Pipe is made in long 13-foot lengths. That means fewer joints . . . more footage per day. Its light weight also speeds up installation, reduces handling costs.

Tight sleeve-type joints. To guard against costly infiltration and keep down the load at the disposal plant, Transite has a sleeve-type joint combining flexibility with tightness. Easily assembled, *stays* tight in service.

Smooth interior surface. An advantage that assures high carrying capacity (Kutter's n=0.010). This frequently permits the use of smaller pipe, or flatter grades with shallower trenches.

An asbestos-cement product. Made of asbestos and cement compressed into a tough, dense, homogeneous structure, Transite Sewer Pipe is strong, durable and highly resistant to destructive agencies underground. Its efficiency and economy has been proved through the years under a wide range of service conditions.

If your plans include sewage works improvements, write for Brochure TR-21A which gives the facts about Transite Sewer Pipe. Johns-Manville, 22 E. 40th St., New York 16, N. Y.

JOHNS-MANVILLE JM PRODUCTS

Johns-Manville TRANSITE *SEWER* PIPE

FOR EFFICIENT, ECONOMICAL SEWAGE DISPOSAL

Tiemann Promoted at Superior Engine

Willis F. Tiemann has been appointed works manager of the Superior Engine Division of The National Supply Co. at Springfield, Ohio. He has been with Superior since 1933, holding various positions as foreman, superintendent of assembly, plant superintendent, general plant superintendent, and assistant works manager before his recent promotion.

W. F. Tiemann

Mr. Tiemann replaces John D. Spalding, who resumes his former duties as works manager of National's Torrance, Calif., plant.

Pittsburgh Equitable Forms Export Firm

Col. W. F. Rockwell, President of Pittsburgh Equitable Meter Co., Pittsburgh, Pa., has announced the formation of the Pittsburgh International Corporation with offices after September 1 at 7701 Empire State Building, New York City. This firm will handle the export, sale, and distribution of products manufactured by Pittsburgh-Equitable Meter Co.-Merco Nordstrom Valve Co., and subsidiaries.

The new corporation will be under the direction of A. L. DiGiulian, Vice-President who has had extensive experience in foreign markets. An expert linguist, Mr. DiGiulian was educated in Europe, completing studies in Italy, Spain, and Portugal and was graduated from Georgetown University, School of Foreign Service, in 1927. He spent many years in the U. S. Government Service, and just before accepting his new post was Chief, Foreign Communications Section, Office of Exports, Foreign Economic Administration, Washington, D. C.

George E. Doty will assist Mr. DiGiulian in the operation of this firm. Mr. Doty, after attending Carnegie Institute of Technology, joined the Pittsburgh Equitable Meter Co. in 1926. He has had experience in all phases of manufacture and sale of the company's products. Prior to the war he served as Export Manager and more recently was assigned to the Merco Nordstrom Valve Division at the Oakland, Calif., plant as assistant to the General Manager.

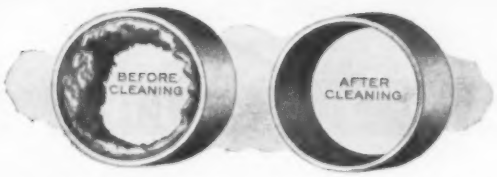
STREET-NAME SIGNS

Now Available!

Attractive, permanent, rust-proof, metal Street-Name Signs by Cataphote are now available! Outstanding in appearance and legibility. Also—order all types of metal traffic signs with Cataphote Reflector Buttons for day-and-night visibility. Used coast to coast for safer higways.

CATAPHOTE CORPORATION
Toledo, Ohio

There's NO substitute for experience



That's why WATER WORKS OFFICIALS select the . . .

NATIONAL METHOD OF WATER MAIN CLEANING

Cleaning out clogged water mains works wonders in restoring maximum water supply. BUT the job must be done RIGHT if you want best results and savings in both time and money. There's one SURE way to get these results. Just turn the whole job over to NATIONAL. You get experience —facilities—expert workmen—100% satisfaction. For illustrated PROOF —send for our latest comprehensive booklet. Our branch office nearest you can supply complete data.

BRANCHES

1221 Mortgage Guarantee Bldg., Atlanta 3, Ga.
607 1st Nat'l Bank Bldg., Birmingham 3, Ala.
115 Peterboro St., Boston 15, Mass.
205 W. Wacker Drive, Chicago 6, Ill.
P. O. Box 683, Jacksonville 1, Fla.
421 B M A Bldg., Kansas City 8, Mo.
2028 Union Ave., Montreal 2, Canada
3812 Castellar St., Omaha 5, Nebr.
210 E. Franklin St., Richmond 19, Va.
7103 Dale Ave., St. Louis 17, Mo.
501 Howard St., San Francisco, Calif.
P. O. Box 887, Waco, Texas
576 Wall St., Winnipeg, Canada

NATIONAL WATER MAIN CLEANING CO.
30 CHURCH STREET • NEW YORK 7, N. Y.

38 YEARS OF SUCCESSFUL WATER MAIN CLEANING

Easy to LAY

No expensive equipment. No skilled labor. No lead to melt and pour. The lead and redwood wedges are placed in the pipe bells at the McWane foundry. All you need is a hammer . . . for all you do is "socket the spigot and calk".

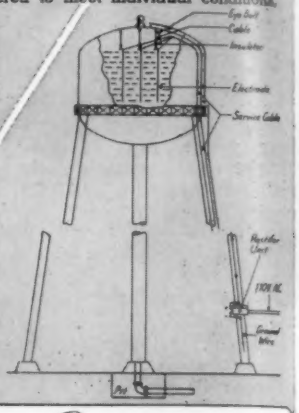
Prompt Shipments!

McWANE CAST IRON PIPE CO.
Birmingham 2, Ala.

McWANE 2" CAST IRON PIPE

STOPS TANK RUSTING *Below the Water Line* PERMANENTLY!

Rust below the water line is by far the most troublesome, expensive and destructive item of tank maintenance. But it can be eliminated completely—permanently. A proven electrolytic system (Cathodic Protection), carefully engineered to meet individual conditions, stops all rust formation—even removes old rust. Installed without draining the tank. Costs pennies to operate. Safe, low voltage. No paint, no chemicals. And no more rust, no more scraping or painting. Applicable to many types of submerged metal equipment. Method approved by Associated Factory Mutual Laboratories, War Department (Chief Engineer's Office) and American Water Works Assn. Write for facts—NOW.



ELECTRO RUST-PROOFING *Corporation*
DAYTON 10, OHIO, U. S. A.

"LOCK-LID" STREET WASHERS 3/4" and 1" SIZES

MURDOCK

Since 1853 A RELIABLE NAME ON OUTDOOR WATER SERVICE DEVICES

ANTI-FREEZING OUTDOOR DRINKING FOUNTAIN

LARGE ANTI-FREEZING HYDRANTS 1½" TO 2" INCLUSIVE

SELF-CLOSING ANTI-FREEZING HYDRANT

ANTI-FREEZING (COMPRESSION) HYDRANT

THEY'RE BETTER FOR YOUR PEOPLE

Your public has a vital interest in MURDOCK Outdoor Water Service Devices.

Take MURDOCK Outdoor Drinking Fountains for instance:

Each drink is fresh from the water main; cool, refreshing. The surplus drains into sewer each time. No water remains in fixture to get warm, stale, unpalatable.

Pedal-operated; less likely to get out of fix. Operate every day. Don't give trouble. Working parts lift out of fixture when repairs are ever necessary.

The Murdock Mfg. & Sup. Co.
426 Plum St., Cincinnati 2, Ohio

"IT PAYS TO BUY MURDOCK"

KWIK-MIX BITUMINOUS NON-TILTING MIXER

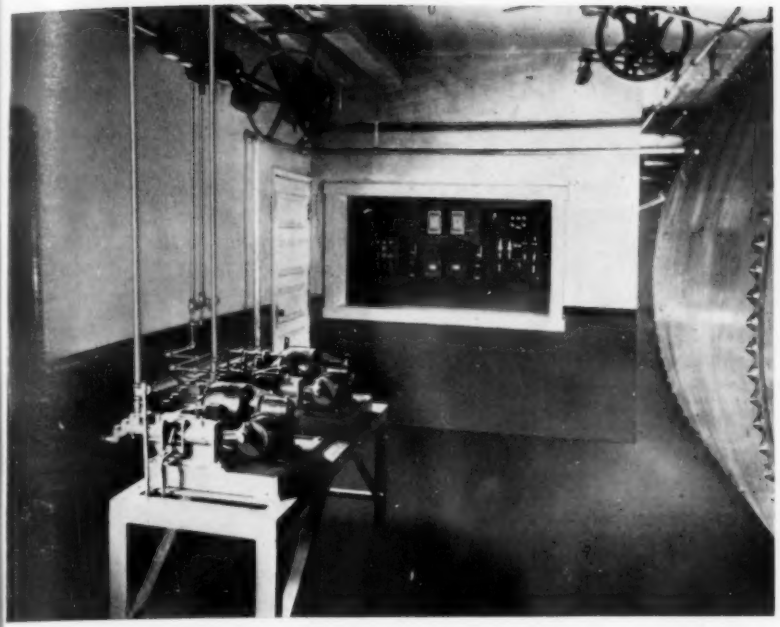
● An End Discharge mixer for applying cold or hot laid bituminous mixtures to new surfaces, for re-facing and for maintenance. The wide, quick acting discharge gate of the non-tilting drum reduces the time between batches. This light weight, portable unit can be quickly spotted and because of the end discharge advantage, the mixer can be conveniently pulled away from the discharged material. Equipment includes two burners which can be easily removed for controlling temperatures.

●

Write for Catalog BAC

●

KWIK-MIX COMPANY
KOEHRING SUBSIDIARY
PORT WASHINGTON • WISCONSIN



The speed of these two chemical feed pumps at Cobleskill, N. Y., is regulated by electronic control. The edge of one of the pressure filters can be seen at the extreme right of the picture.

Automatic Chemical Feed System to Treat Water Used Successfully

Two duplex chemical pumps feed activated carbon, alum, and soda ash in direct proportion to the half million gallons a day water flow at the Cobleskill, N. Y., water works.

Thymotrol controls, mounted on a panel board and actuated by a Sparling meter in the main water line, regulate the speed of the pump motors, thus feeding liquid chemicals in quantities exactly proportional to water consumption. Controls function instantly and the meter and motors respond at once to the controls, so there is no deviation from predetermined percentages of treating agents.

Pumps and controls were furnished by Milton Roy Pumps, 1300 E. Mermaid Ave., Philadelphia 20, Pa.

Help for Selecting Packings Offered in Folder

A guide for selecting the most suitable packing for equipment using specific fluids and for other services, especially for valves of all types, air compressors, centrifugal pumps, is contained in a new pocket-size folder on Palmetto Packings being offered by Greene, Tweed & Co., Bronx Blvd., at 238th St., New York 66, N. Y.

This folder contains condensed descriptions of each grade of packing and their purposes and identifying illustrations. The center pages are arranged to combine a complete application chart of Palmetto Self-Lubricating Packings with marginal references to descriptions of each.

Also described are the many other types of Palmetto Packings, including a tabulation of approximate lengths per pound of each type.

EVERYWHERE
USERS PRAISE

BUILDERS Hook Light
SAND EXPANSION GAUGE

Some enthusiastic comments:

- "Very satisfactory in determining sand expansion".
- "Simple to operate and portable—most convenient to use at any point in the plant".
- " . . . Has paid for itself several times over".

Everywhere filtration plant operators endorse this new instrument for measuring sand expansion with a light—and it costs only $35.00 F.O.B. Providence. For Bulletin 349 address Builders-Providence, Inc., (Division of Builders Iron Foundry), 18 Codding St., Providence 1, R. I.

Sincerely
BUILDERS-PROVIDENCE

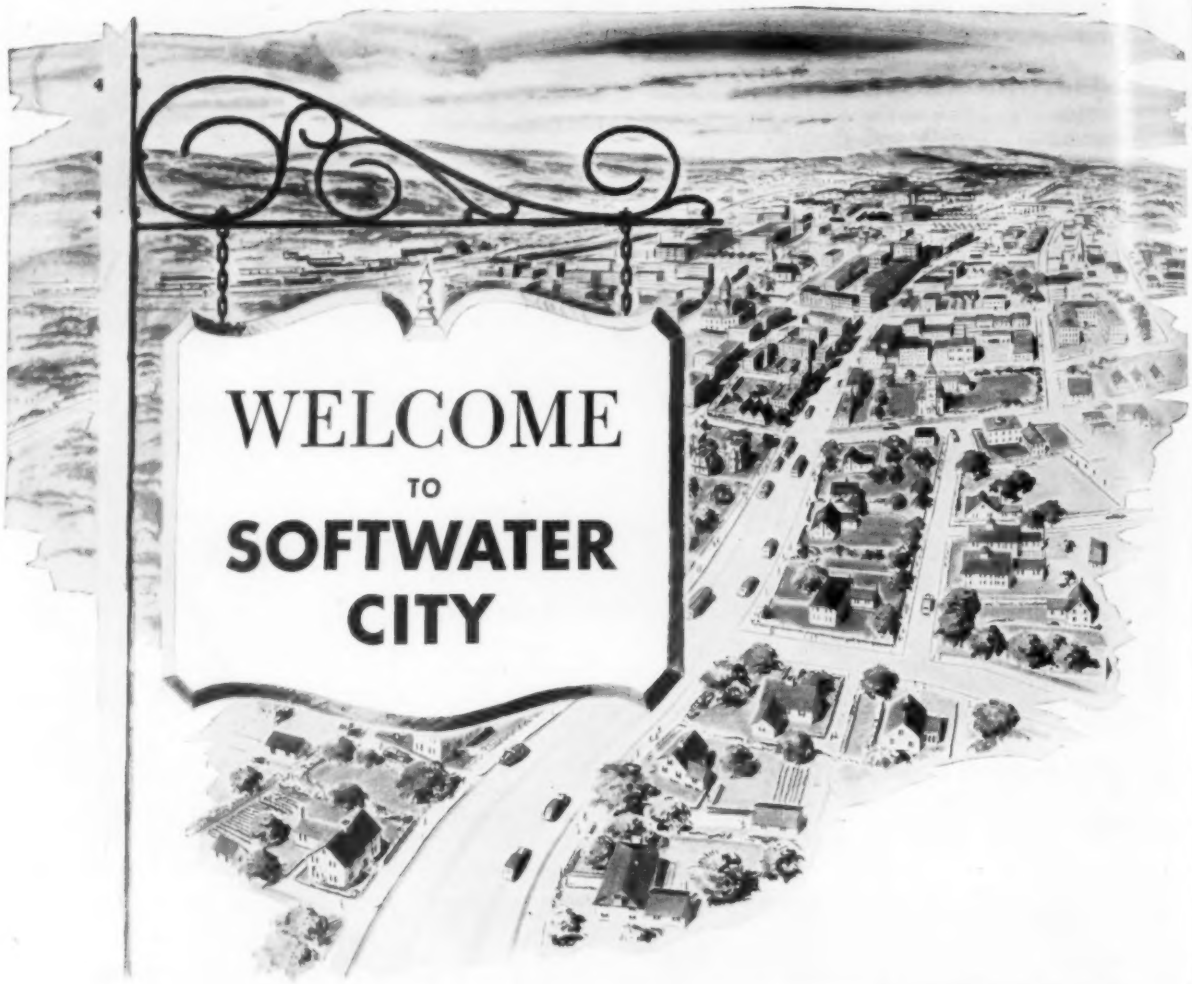
GOOSE NECK *Specialists*

• Yes, we're specialists in the manufacture of lead goose necks, for all the skill and art of the old-timers goes into the shaping and finishing of all hand wiped joints. Quality craftsmanship you'll appreciate because it meets your requirement for dependable year in, year out performance. Remember the name "McDonald."

EST. 1856
McDonald

ILLUSTRATED: PLATE E-3192— *McDonald Lead Goose Neck with Hand Wiped Joint. See our catalog for sizes, lengths and weights now available.*

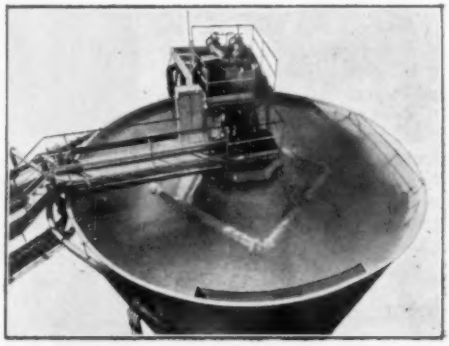
A. Y. McDONALD MFG. CO.
DUBUQUE, IOWA
BRASS GOODS • PUMPS • OIL EQUIPMENT



IT'S A BETTER PLACE to live, work and play. Because, you see, *this* city has *soft* water—conditioned by Permutit*.

Permutit removes the hardness and other impurities found in city water supplies, makes the water soft, clear, iron-free. It brings new luxury, labor-saving and cleanliness to every family in town... attracts new business and industry. Hundreds of modern cities have found this out after installing Permutit equipment.

Make *your* city a better place to live in! Write *now* for details to The Permutit Co., Dept. G-3, 330 West 42nd Street, New York 18, N. Y. or Permutit Co. of Canada, Ltd., Montreal. * Trademark Reg. U. S. Pat. Off.



PERMUTIT SPAULDING PRECIPITATOR removes water hardness, dirt and color by the sludge blanket process. This new-design equipment cuts detention time, saves chemicals, takes only half the space of former methods. Present installations handle capacities up to 120,000,000 gallons daily.

PERMUTIT

SOFT WATER for modern cities

WATER CONDITIONING HEADQUARTERS

This American revolving aerial ladder is quickly adjusted to desired height, and does not interfere with traffic.

Elevated Utilities Equipment for Motor Vehicles

For servicing and painting street, highway, and signal lights, trimming trees, and doing line construction work, municipalities and public utilities will be interested in the revolving aerial ladder manufactured by The American Coach & Body Co., Woodland Ave. at East 93rd St., Cleveland 4, Ohio.

This aerial ladder needs only one man to operate it since all spotting and adjustments are made from the truck bed by a turn of the hand wheel. Traffic does not interfere with operations because the ladder will extend over parked cars. When the upper section is extended the platform falls into position and needs no special adjustment for different angles. The lever, which is controlled at either hand wheel, makes possible twenty fixed positions of operation through a full 360 degree arc.

Crocker-Wheeler Division Makes Appointment

Charles A. Butcher has been appointed Assistant General Manager of the Crocker-Wheeler Division, Joshua Hendy Iron Works, Ampere, N. J. He was formerly Manager of the Pacific Coast Manufacturing and Repair Department of the Westinghouse Electric & Mfg. Co., Oakland, Calif., and is the author of several articles on automatic controls for power generation and on sub-station and distribution equipment. In addition he has invented a number of devices and control systems related to automatic switchgear.

After his early electrical experience with the Des Moines City Railway Co. he joined Westinghouse and subsequently held the following positions: Eastern District Engineering Manager and Eastern District Service Manager at New York; Manager of Eastern Manufacturing and Repair Department at Newark, N. J.; Assistant Manager of Manufacturing and Repair Department, East Pittsburgh; and then Manager of the Pacific Coast Manufacturing and Repair Department.

A. F. Wakefield Elected President of I.E.S.

Albert F. Wakefield, President of the F. W. Wakefield Brass Co., Vermilion, Ohio, manufacturers of lighting and signalling equipment for the Navy, has been elected President of the Illuminating Engineering Society to take over the office on October 1.

Mr. Wakefield has been active in the society for over 25 years and served on numerous non-technical committees of I.E.S. before his election to the vice-presidency in 1943.

Other national officers elected by the Illuminating Engineering Society included L. E. Tayler of the Detroit Edison Company, General Secretary; Bruce J. Jensen, Public Service Electric & Gas Co., Newark, N. J., Treasurer; R. W. Staud, Benjamin Electric Manufacturing Co., Des Plaines, Ill., Vice-President; and directors, James M. Ketch, General Electric Co., Nela Park, Cleveland, Ohio; and Samuel G. Hibben, Westinghouse Lamp Division, Bloomfield, N. J.

HERCULES

FOR THE BIG JOBS!

For any trailer or semi-trailer with any make of fifth wheel

On the heavy, tough jobs—that's where a Hercules body proves itself! Big loads, punishing service, continuous operation . . . that's the type of work where Hercules' built-in stamina shows up. Designed and built for heavy-duty service, Hercules dump bodies are available for installation on any make of trailer or semi-trailer.

Collect dividends through more and bigger payloads, lower cost operation. Your Hercules distributor is prepared to supply complete information and service. See him today for complete details about the features that only Hercules can deliver.

HERCULES

DUMP BODIES AND HYDRAULIC HOISTS
SPLIT SHAFT POWER TAKE-OFFS • COAL CONVEYORS

Ask About Turn-O-Matic Cement Boxes for Bulk Cement—Now Available—Write Today!

HERCULES STEEL PRODUCTS COMPANY . . . GALION, OHIO

By this sign you will know

INFILCO

***Half a Century of Experience* is back of the Water Conditioning and Sewage Treating Equipment Infilco Designs and Builds for You.**

Take advantage of this. Standardize on Infilco Products — everything from Accelators to Zeolites. Place undivided equipment responsibility squarely on the shoulders of Infilco. You'll get better results.

2,000,000 g.p.d. Accelator Softener at Antigo, Wisconsin

There are Accelators for Softening, Clarifying and Stabilizing — and you can't beat them for PERFORMANCE and ECONOMY. Ask for Bulletin 1824.

INFILCO
INCORPORATED
325 W. 25th PLACE, CHICAGO 16, ILL.

FEDERAL ELECTRIC COMPANY, INC.
SIREN HEADQUARTERS

How
POWER
is built into this
FEDERAL
***Traffik-King* SIREN**

Oscillating Red Light;
Single or Double Tone; Coaster Model

The tremendously powerful tone of Federal Traffik-King sirens demands attention over other traffic noises, clears the way. This model has a distinctive double tone; and it coasts almost two minutes after current is off. Special clutch mechanism releases rotor; coasts much longer than so-called "long roll" types, which seldom roll over 30 seconds. Electric solenoid brake on rotor stops sound instantly. Durably built for long, dependable, maintenance-free service.

Rotors: cast aluminum, precision-machined, individually balanced. Thin, smooth blades for high efficiency.

Ports in rotor and stator accurately spaced, finished to square sharp edge; assure true pitch, powerful tone.

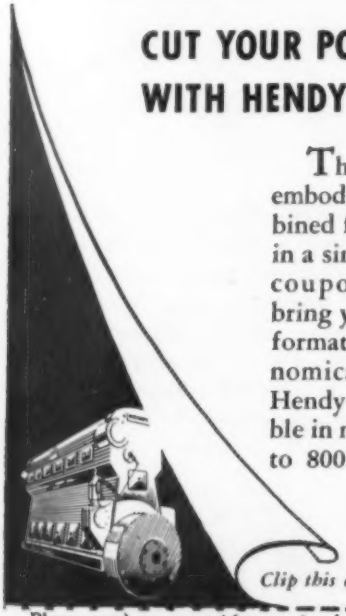
Motors: heavy duty; bronze or ball bearing; 6 or 12 volts.

WRITE for FREE BULLETINS

Details, illustrations, prices, on this and other FEDERAL Sirens

8744 SOUTH STATE ST., CHICAGO 19, ILL.

CUT YOUR POWER COSTS WITH HENDY DIESELS



The Hendy Diesel embodies features combined for the first time in a single design. The coupon below will bring you complete information on the economical and efficient Hendy Diesel. Available in models from 190 to 800 hp.

Clip this coupon, mail it today!

Please send me your 16-page, 2-color illustrated booklet showing the modern features now available in Hendy Diesels.

Name _____

Company _____ *Position* _____

City _____ *Zone* ____ *State* _____

JOSHUA **HENDY** IRON WORKS
ESTABLISHED 1856
SUNNYVALE, CALIFORNIA

The EDDY Hydrant

Eddy Fire Hydrants have many points that appeal to water-works men. For example:

A damaged valve can be replaced in a few minutes at slight expense.

Should the standpipe be broken, not a drop of water need be lost.

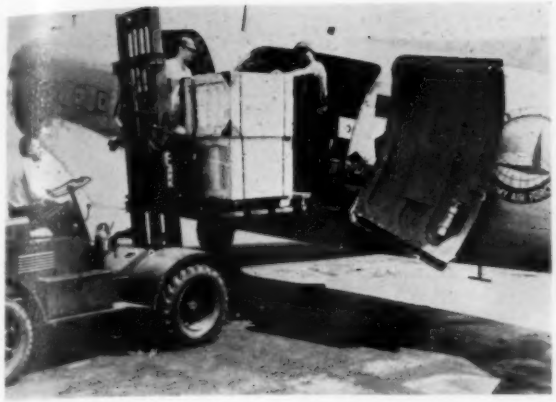
All hydrants are frost-proof.

These and many other points of excellence are thoroughly explained in our catalog, which it will pay you to study.

Also manufacturers of the well-known Eddy Valves

EDDY VALVE COMPANY
WATERFORD **NEW YORK**

Representatives
Jas. B. Clow & Sons, Chicago, Ill.
National Cast Iron Pipe Co., Birmingham, Ala.



Portable Wallace & Tiernan water chlorination units being packed in an Army Transport Command plane for direct air transport to India to help prevent the spread of water-borne diseases.

Water Chlorinating Units Flown to India

Wallace & Tiernan Co., Inc., Belleville 9, N. J., under the direction of the United States Army Corps of Engineers, New York District, has delivered at an Eastern air field enough portable water chlorinating units to supply a city of about 125,000 population with twelve mgd of safe water.

The units were shipped by Army Transport Command to India, to prevent the spread of water-borne diseases there, after Wallace & Tiernan was advised of this rush order and sped production to complete the units on time.

Sales Appointments at Homestead Valve

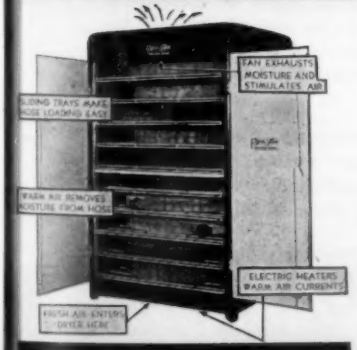
The Board of Directors of the Homestead Valve Manufacturing Co., Inc., Coraopolis, Pa., recently authorized the appointment of Don H. Krey as Sales Manager and Elliott G. Johnson as Assistant Sales Manager.

Mr. Krey will direct all phases of the company's sales efforts including valves, Hypressure Jenny steam cleaners, and Hypressure Jenny compound sales and research. In addition to his duties as Director of Advertising and Public Relations, Mr. Johnson will have supervision of all valve sales activities.

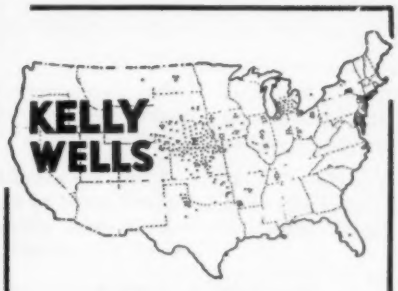
CIRCUL-AIR

FIRE HOSE DRYER

- Is easier to use
- Saves drying time
- Reduces hose stretch
- Prevents mildew and rot
- Improves building design
- Air-conditions as it dries


FAN EXHAUSTS MOISTURE AND STIMULATES AIR
SLIDING TRAYS MAKE HOSE LOADING EASY
WARM AIR REMOVES MOISTURE FROM HOSE
ELECTRIC HEATERS WARM AIR CURRENTS
FAN AIR ENTERS DRYER HERE

THE CIRCUL-AIR CORPORATION
6339 East Palmer Avenue
DETROIT 11, MICHIGAN



ALL OVER THE MAP!

For 25 years Kelly concrete cased wells have stood the test of time. We have several thousand now in service, covering a territory of 33 states and parts of Canada.

Kelly concrete cased wells are especially adapted for developing large water supplies from sand and gravel formations.

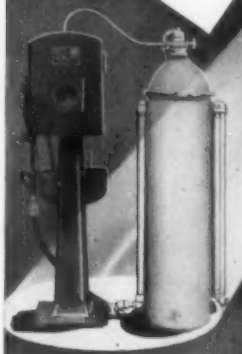
We Guarantee our wells to develop all available water, sand free, to their full capacity.

KELLY WELL CO., INC.
Grand Island, Neb.

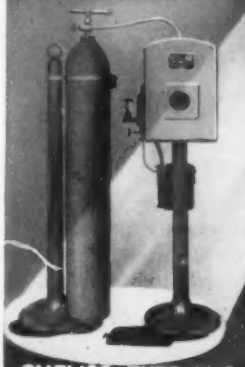
ORDER NOW YOUR CHEMCO CHLORINATORS FOR THE 1945 SEASON. IMMEDIATELY AVAILABLE AND PRICED RIGHT

-INVESTIGATE-

Send FOR THE FOLLOWING FREE BULLETINS
BULLETIN 300-1-TYPE-M-1
BULLETIN 300-3-TYPE-M-3
BULLETIN 300-5-TYPE-M-5
R.S.T.



CHEMCO TYPE M-1



CHEMCO TYPE M-3

OTHER "CHEMCO" PRODUCTS
FILTERS
WATER SOFTENERS
HYDROGEN ION PLANTS
COMPLETE PURIFICATION SYSTEMS
FOR SWIMMING POOLS
ETC.

CHEMCO TYPE M-5

CHEMICAL EQUIPMENT CO.
MAIN OFFICE · LABORATORY · FACTORY
323 CENTER ST. · LOS ANGELES 54 · CALIF.
MIDWESTERN FABRICATION BRANCH
221 W. WATER ST. · CHICAGO 11, ILL.
REPRESENTATIVES IN PRINCIPAL CITIES

• Building longer lasting asphalt roads is only *one* of the ways a Barber-Greene Travel Plant gives you more for your money.

Here's how a B-G Travel Plant cuts down construction expense to help you stretch limited funds into more miles of completed highways:

*** Continuous, high quality production. No batches, no pauses. No human element to lower capacity . . . no dependence on operating skill to maintain consistency.**

*** Reduction of the weather hazard. No partially-prepared material to be spoiled by sudden showers.**

*** Full working periods. Short mixing cycle permits operation on colder days, later at night, earlier and longer in the season.**

*** No sacrifice of bitumen quality to allow for time-consuming blading. No rich or lean spots. Lower percentages of heavier and quicker-setting bitumen with less solvent produce uniformly-coated mixes.**

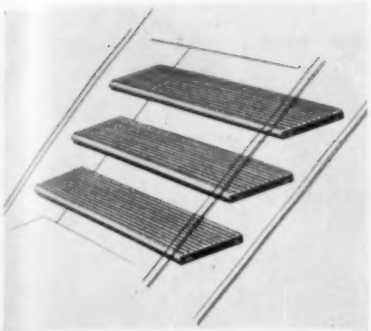
*** Easy job coordination. Mixing and proportioning performed by a single unit under control of two or three men. When aggregate is windrowed well ahead, it's automatically available as needed.**

*** Low investment. Cost of the B-G Travel Plant is no more than that of the necessary machines for mixed-in-place construction of the same mileage.**

*** Versatility. Handles all types of bituminous and stabilized work. Can be centrally located for maintenance requirements . . . becomes an integral part of Central Plant set-up for production of high-type mixes.**

Write for catalogs describing how the economical operation of B-G equipment enables you to surface roads with plant-mixed material at blade-mix cost. Barber-Greene Company, Aurora, Illinois.

Barber-Greene B G *Constant Flow Equipment*



Wooster's all-steel stair steps and groove tread for municipal plants and outside stairways.

Steel Grooved Tread Developed by Wooster

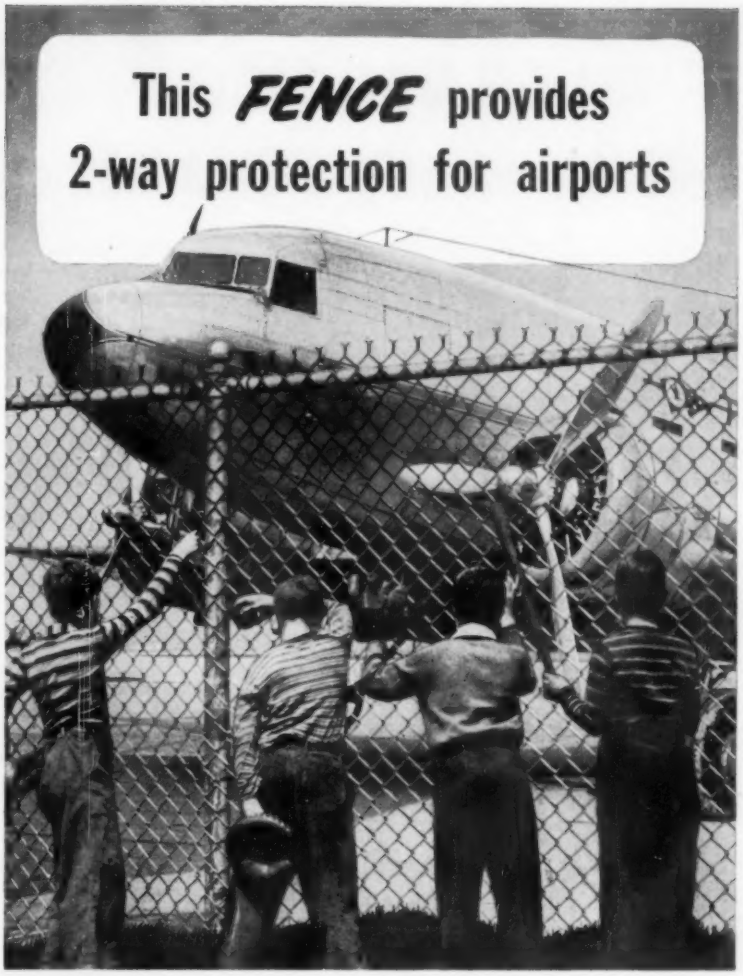
An all-steel grooved tread and stair step suitable for the construction of steel stairs of the open riser or steel riser type has been developed by Wooster Products, Inc., Wooster, Ohio. This tread can be bolted or welded to steel stringers so that in some jobs it is unnecessary to build steel sheet pan-type stairs using concrete.

The safety tread is a part of the steel step itself, whereas on ordinary stair construction, such as concrete filled stairs, the safety tread must be applied to the concrete to afford a like measure of protection. It is suitable for fire escapes, power plant stairways, warehouses, subways, or wherever steel steps are needed. The tread surface is composed of abrasive grip filler and the safety grooves are interlaced with slots to permit drainage.

George Axt Heads New York Office of Engineers

Gannett Fleming Corddry and Carpenter, Inc., Engineers of Harrisburg, Pa., have announced the opening of a New York office at 50 Broad Street and the appointment of George F. Axt as Manager.

Mr. Axt, who is a graduate of Pratt Institute and was a graduate student at Harvard University in architecture, has had both architectural and engineering experience. In addition to having been in responsible charge of many buildings including Saks-Fifth Avenue department store and the East River and Fort Greene housing operations, all in New York, he was for three years Assistant Regional Supervisor for the Home Owners' Loan Corporation in New York. He was Assistant Chief in Charge, for the Architect-Engineer, of all Technical Production and Supervision of Drafting on four air bases in the Caribbean and was Assistant Project Manager for the Architect-Engineer on the Andrew's Field Airport in Maryland, near Washington, D. C. Recently he was Architect Consultant to the Engineer on the New York Municipal Airport at Idlewild.



BUILD a new airport and all the curiosity seekers from miles around will be scrambling over the place in no time. You can keep them safe from possible danger —keep them from tampering with valuable property—by installing sturdy, hard-to-get-over Cyclone Fence.

Good fence is of vital importance for airports, parks, playgrounds, schools, swimming pools or other public structures. To assure 2-way protection for your new projects, specify U·S·S Cyclone. It is the world's most widely used property protection fence.

Our engineers are available for consultation. They are trained experts who have the benefit of the knowledge gained by Cyclone in more than 50 years in the fence industry. They will be glad to help you choose the right fence for your needs.

SEND FOR FREE 32-PAGE BOOK

In the meantime, mail the coupon for our 32-page book on fence. Full of facts and specifications. Profusely illustrated. Complete information on different types of fence, gates, athletic field equipment, etc. Whether your plans are to be carried out now or in the future, you need this free book.

CYCLONE FENCE DIVISION
(AMERICAN STEEL & WIRE COMPANY)
Waukegan, Ill. · *Branches in Principal Cities*
United States Steel Export Company, New York

CYCLONE FENCE DIVISION · American Steel & Wire Co
USS CYCLONE FENCE
UNITED STATES STEEL

Cyclone Fence
Waukegan, Ill., DEPT. B85
Please send me, free of charge, your 32-page book on Fence.
Name.....
Address.....
City..... State.....
Title or official capacity.....

UNITED STATES STEEL

WHY DO YOU FIND MAXIMS
on the really TOUGH *silencing jobs?*

The giant Maxims standing out against the skyline below quiet the exhaust of Diesels on test stands at a large industrial Diesel manufacturing plant. Time and again in important installations of this kind and in many smaller installations where the silencing problem is none the less critical, the most satisfactory answer has been found with Maxims.

The reason "why" is threefold and lies in *experience*, *performance* and *adaptability*.

- Maxim can show more years of research and experience in solving tough silencing problems.
- Maxim performance over the years is typified in thousands of successful working installations, large and small.
- Maxim adaptability means a line of silencers so varied that it is seldom necessary to go beyond the standard silencers to get a job "tailor-made" for your installation.

By the same token when special silencers *are* needed, Maxim engineers, constantly working on development and new design problems, are particularly capable of solving your special problems.

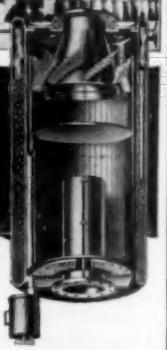
MAXIM EXHAUST & INTAKE SILENCERS

WRITE FOR BULLETINS
D 125
D 127
D 101
D 37

These Maxim Silencers (model MUC illustrated) are designed to silence the exhaust or intake of internal combustion engines, steam engine exhaust, air compressor intake, vacuum pump discharge and the intake or discharge of blowers of the positive pressure type. Wide choice of models to fit varying space and silencing requirements. Spark arresting where necessary.

MAXIM HEAT RECOVERY SILENCERS

WRITE FOR BULLETINS
WH 100
WH 101
WH 103



Maxim Heat Recovery Silencers combine efficient silencing of engine exhaust with spark arresting (where necessary) and with the efficient recovery of waste exhaust heat to produce steam or hot water for heating or processing operations. These Heat Recovery Silencers give highly efficient heat transfer . . . are available with automatic controls, and may be run wet or dry without injury to the unit.

THE MAXIM SILENCER CO. • 66 HOMESTEAD AVE., HARTFORD, CONN

ARMY E NAVY

MAXIM

New Head for Indian Motocycle Co.

Rowland Burnstan has been elected President and General Manager of the Indian Motocycle Co., Springfield, Mass., at a regular meeting of the Board of Directors recently. At the same time E. Paul duPont was elected to the newly created position of Chairman of the Board.

Rowland Burnstan

Mr. Burnstan has an outstanding background of experience in business management and manufacturing. Previously he had been Business Manager of the Chicago *Times* and Director of the Aeronautical Division of the Minneapolis-Honeywell Co. Besides being president of Indian, he is also President of the Lawrance Aeronautical Corp., Linden, N. J., and this new association between Indian and the Lawrance Company is expected to lead to mutual use of the manufacturing facilities and engineering knowledge of both companies.

Wickwire Spencer Names Assistant Advertising Manager

Sidney E. McCrum has been appointed Assistant Advertising Manager of Wickwire Spencer Steel Co., 500 Fifth Ave., New York 18, N. Y., according to a recent announcement by C. B. Konselman, Advertising and Public Relations Manager.

Sidney E. McCrum

Mr. McCrum has had extensive experience in advertising preparation and production and was previously Assistant to the Advertising Manager of the Chicago Pneumatic Tool Co., New York.

A greatly expanded sales and merchandise program is planned by Wickwire for the post-war period.

Robert and Company History Presented in Booklet

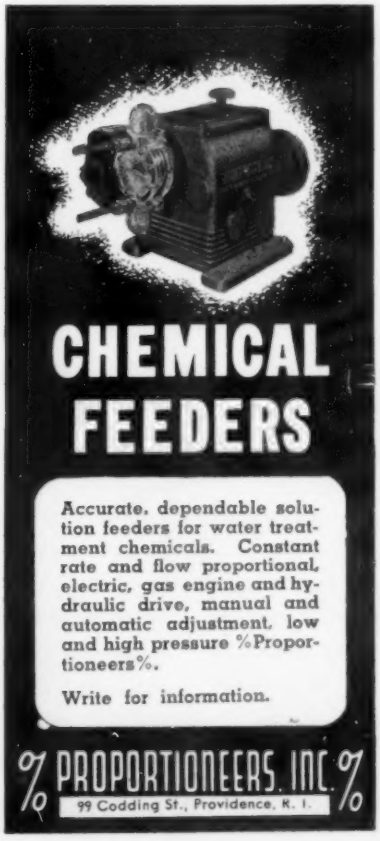
The story of Robert and Company, Atlanta, Ga., and the part it has played in the last twenty-five years in its field of endeavor is portrayed in an illustrated booklet presented by this firm of architects and engineers. It is dedicated to "our clients, the contractors and material firms who have worked on projects with us, and our employees."

The coordination of the work of the different departments, the organization of branch offices or "field headquarters" wherever projects require them, and descriptions and pictures of some of the company's peacetime activities as well as Army and Navy projects are included. Among the latter are: an assembly and repair shop for the U. S. Naval Air Station at Jacksonville, Fla.; an assembly plant at Mariatta, Ga., for Bell Aircraft; and an administration building for the Army Service Forces Depot at Atlanta, Ga.

Radio Towers and Masts Available

The War Production Board is permitting us to manufacture radio towers and masts in unlimited quantities from idle or surplus inventories. Due to cancellations and cut-backs we have a complete stock of materials which will enable us to make prompt shipment of orders. This may interest those who desire to purchase radio masts and towers, but who do not have any priority.

Harco Steel Construction Co., Inc.,
Elizabeth 4, N. J.


CHEMICAL
FEEDERS
Accurate, dependable solution feeders for water treatment chemicals. Constant rate and flow proportional, electric, gas engine and hydraulic drive, manual and automatic adjustment, low and high pressure %Proportioneers%.
Write for information.
% PROPORTIONEERS, INC. %
99 Codding St., Providence, R. I.

Tank Builders For Over 80 Years!
Tanks, Towers, Kettles, Kiers, Vats, Vessels, Bins, Boilers, Stacks, Standpipes and other fabricated platework from your specifications or ours.
Write for "Tank Talk" — 6-A, or let us figure on your requirements.
R.D.COLE MFG.CO.
Established in 1854
NEWNAN · · · GEORGIA

HARDIE

DEPENDABLE SPRAYERS

No other single unit of municipal equipment embodies such a wide range of utility as a Hardie Sprayer. The protection of priceless shade trees is only one of its many functions. Golf greens and fairways, nurseries, parks and ornamental plantings also benefit through easy efficient application of pest control sprays and liquid fertilizers. The same Hardie unit also sprays lagoons for mosquito control and acts as an efficient fire control unit for brush, grass and other fires. Write for Catalog showing Hardie Sprayers for every purpose now in production.

THE HARDIE MFG. COMPANY

Los Angeles, Calif. Hudson, Mich. Portland, Oregon

"Kangaroo Kaddy" the new golf cart introduced by Jarvis Mfg. Co. for municipal golf courses.

New Revenue for Municipal Golf Courses

The wartime shortage of caddies has increased the popularity and use of golf carts and created a new source of profit for golf clubs and municipalities. Since there is little or no maintenance cost and the same cashiers and starters who collect the green fees can also operate the cart rentals, there is practically no additional expense for cart rental operation. Many municipalities which formerly leased these rental carts are now purchasing their own carts.

A newcomer in this field is a special electric-welded, lightweight cart named the "Kangaroo Kaddy" manufactured by the Jarvis Manufacturing Co., Glendale, Calif. It features simple, streamlined tubular steel construction, double ball bearing wheels for easy rolling, easy balance for light or heavy bags, and wide spread wheels to keep from tipping on hillsides.

New President for Paving Brick Institute

Claude C. Blair of the Metropolitan Paving Brick Co., Canton, Ohio, has been named President of the Paving Brick Institute, 1756 K St., Washington 6, D. C.

At present the Institute is completing plans for an extensive program of study at a leading midwestern university on the latest technological developments in the manufacture and use of paving bricks.

A recent survey of manufacturers indicates that the industry is prepared to meet post-war demands on short notice because there are no reconversion or retooling problems to be solved. Standard sizes of paving brick which were adopted before the war will again be available for post-war use.

Highway and street construction is expected to reach record-breaking proportions within 18 months after the end of the war and should reach the unprecedented total of about $2,000,000,000 annually shortly thereafter, according to Mr. Blair.

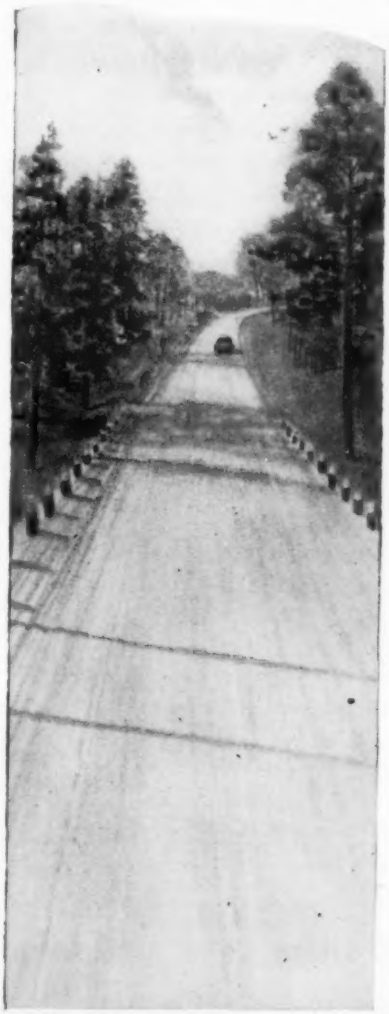
"Owing partially to the virtual discontinuance of new highway construction during the emergency, expenditures during the first five post-war years are likely to total between $8,000,000,000 and $9,000,000,000, much of which already has been planned by the Federal, state, and local governments," Said Mr. Blair.

"In addition to thousands of miles of two- and four-lane highways to be built throughout the country in the early years after the war, the one million new dwelling units to be built annually will require many miles of new municipal streets, while an extensive program of secondary roads will further increase the road building program."

Inglee Much Improved

His many friends throughout the water works field will be happy to learn that Clinton Inglee, President and General Manager of the National Water Main Cleaning Co., 3 Church St., New York 7, N. Y., has largely recovered from the serious operation which he had to face last May. He was able to leave the hospital several weeks ago, and is now recuperating at his home in Amityville, Long Island.

STRETCH FEDERAL AID



the

Calcium Way

Government financial support has been provided for postwar secondary roads as well as roads where traffic counts justify paving. How many miles you get depends upon how you use the money.

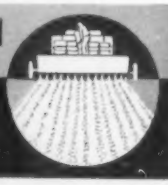
Low-cost roads need not be poor roads. In fact, some of the finest roads in the country are built the calcium chloride way with local soil materials such as gravel, stone or shell aggregate bound together with moisture provided and retained by calcium chloride.

The use of local aggregates and binder soils consolidated and held moisture bound with calcium chloride, also provides a market for local labor. Best of all, it provides an all-weather road that stays firm in bad weather, resists frost action and is dustless in summer, rain or shine.

Write today. Ask for Bulletins showing the calcium chloride way to low-cost, postwar roads.

Calcium Chloride Association
4145 Penobscot Building
Detroit 26, Michigan

Dust is the cement in your gravel road
Moisten it with
CALCIUM CHLORIDE



FIRE ALARM TRADE MARK GAMEWELL REG. U.S. PAT. OFF. POLICE

MUNICIPAL SIGNALING SYSTEMS

THE GAMEWELL COMPANY, since 1866, has specialized in the design, manufacture, engineering and installation of Municipal fire alarm and police signaling systems.

STANDARD
MUNICIPAL FIRE ALARM BOX
THREE-FOLD TYPE

Gamewell systems are now in service in all parts of the world, protecting more than 2000 municipalities, many of the largest industrial and institutional establishments, and since the outbreak of war more than 500 systems have been supplied to protect properties of the Allied Nations.

STANDARD
MUNICIPAL POLICE BOX

Time is the vital element when fire occurs — a few seconds may mean the difference between a nominal loss and a conflagration.

The most efficient fire department is helpless until the alarm is given and prompt use of the box is the most certain method of reducing the fire loss.

You can help by urging the installation of a box at every fire hazard — the box saves time.

The police box contributes to the prevention of crime and to the discovery of fire — and consequently to decreased property losses. More than 50% of all fires occur at night and are frequently discovered by patrolmen.

Effective police patrol discourages criminals and decreases the fire hazard — the police box ensures adequate patrol.

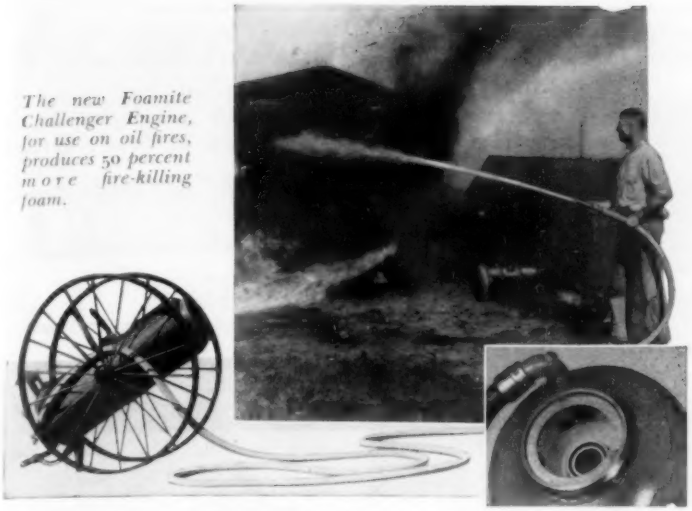
You can help by urging adequate police supervision and the recorded performance of police duty.

DELAYED ALARMS COST MILLIONS ANNUALLY

Individual problems given special attention — no obligation

THE GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS



The new Foamite Challenger Engine, for use on oil fires, produces 50 percent more fire-killing foam.

New Chemical Engine for Fire Killing Foam

The Foamite Challenger 40-gallon engine manufactured by American-La France-Foamite Corp., Elmira, N. Y., extinguishes hot oil fires without danger of reflash. Approved by both Underwriters and Factory Mutual Laboratories, it is now in production.

This giant fire killer delivers over 450 gallons of tough, tenacious, lasting foam in less than three minutes. Among its several special features is a metering device of importance to its foam-making function.

Free illustrated literature is available upon request.

Addition to Engineers' Staff at U. S. Testing Co.

T. Smith Taylor has recently been added to the staff of engineers at The United States Testing Co., Inc., Hoboken, N. J. In his new position he will act as technical advisor to all testing and research divisions of the company.

Mr. Taylor was formerly Professor of Physics in charge of the Graduate School of Newark College of Engineering, and more recently was Chief Engineer in charge of development for the Silenium Rectifier Division of Federal Telephone and Radio Corporation.

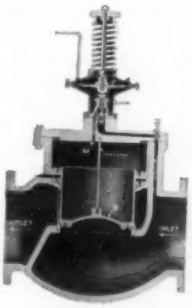
He has been active in many phases of The American Society for Testing Material work on electrical insulating and plastic materials.

Street Traffic Control With Left-Turn Arrow

Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill., which specializes in designing controls and timers for solving traffic signaling problems has introduced a new RECO 7 circuit traffic control especially designed for troublesome left turn intersections.

This new control is equipped with silver contacts and a synchronous motor for operating on 115 volt, 60 cycle AC current. However, it can be equipped with any number of circuits required and arranged for other current specifications and time cycles.

This control is equipped with a left-turn arrow which holds green for fifteen seconds while the red light holds for 45 seconds after which the green arrow and the red signals switch to green for thirty seconds. An amber light shows motorists a coming change during the last three seconds of the green and switches with the green to red. The flashing action of the control is sharp and clear.



STOP CHECK SINGLE-ACTING ALTITUDE VALVE

★

This valve installed in the upstream line automatically maintains a uniform water level within 3" to 12" variation to prevent any tank overflow; also by means of the internal "stop check" piston assembly, prevents loss or return of storage water back through the valve—making the valve very desirable for use where metered water is purchased, or wherever it is imperative that there be no possible return flow.
This valve may be fitted with "Differential" Control for delayed opening, if desired.

Write for Specifications

GOLDEN-ANDERSON VALVE SPECIALTY CO.
Fulton Building Pittsburgh, Pa.

A timely message to City Managers

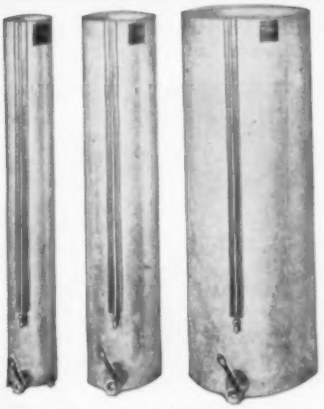
HAND heavy-duty storage batteries, when installed in the following Departmental vehicles, show long life characteristics:

POLICE RADIO CARS	3-6 yrs.
SANITATION TRUCKS	3-6 yrs.
ROAD SCRAPERS & SNOW PLOWS	3-6 yrs.
EMERGENCY TRUCKS & AMBULANCES	4-6 yrs.
FIRE ENGINES	4-9 yrs.

HAND storage batteries are unconditionally guaranteed for two years. Departmental test runs are invited.

The HAND LABORATORY
for
Electro-Chemical Research and Development
Nyack, N. Y.

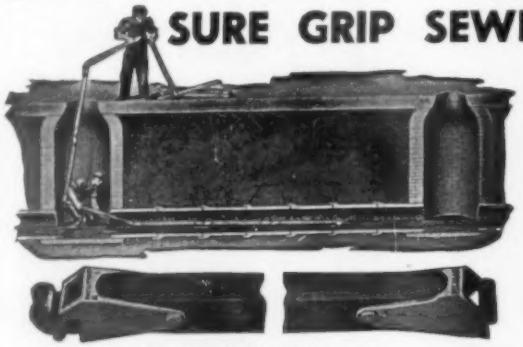
CALIBRATED TANKS



For water meter testing these tanks are accurate, durable and dependable. Made in 5 sizes, calibrated in gallons and cubic feet, also in percentages fast and slow. These tanks are made of heavily galvanized steel, have quick opening drain valves and brass gauge strips.
Write for catalog.

FORD Meter Box Co.,
WABASH, INDIANA

SURE GRIP SEWER RODS and ACCESSORIES



The REGULAR, a light rod,
Fir stock 1¼ x 1¼ inch square.

are joined together with a dual lock forming a rigid chain that will float. They can be coupled or uncoupled upon the street if desired. Made in two sizes.

The MASTER, a heavy duty rod,
Fir stock 1½ x 1½ inch square.

Write for catalog on complete line of sewer cleaning equipment.

EXPANDING SEWER MACHINE CO.
NAPPANEE, IND.

DOLGE WEED-KILLER DOES ALL THREE

Place Requisitions Now!

Let Dolge lessen your labor situation by chemically controlling your weed problems. One man with Dolge Weed-Killer can often accomplish as much as six with hoes. Unwanted growth in sand traps, tennis courts, parking areas, drives, walks, gutters—thistle, nettles and briars in the rough are chemically destroyed. Limited quantities expected, so place your order today. Write for Booklet AU-3

The C. B. DOLGE CO. WESTPORT, CONNECTICUT

½ Cu. Yd. 8' Lift

FRONT END SHOVELS
for Industrial Tractors
Write for Catalog

Elkhart **White Mfg. Co.** Indiana

Cutler-Hammer Expands for Post-War Period

Although currently engaged largely in production for the armed forces, Cutler-Hammer, Inc., Milwaukee, Wis., took the first step in broadening its management organization by electing the following new officers at the recent Board of Directors meeting:

G. S. Crane

F. R. Bacon, Chairman of the Board; H. F. Vogt, Chairman of the Executive Committee; G. S. Crane, President; H. F. Vogt, Vice-President and Treasurer; J. C. Wilson, Vice-President and Secretary. F. R. Bacon and G. S. Crane were elected to Executive Committee.

Mr. Bacon, founder of the company, has been president from 1896 to the present except for the period between May 1924 and April 1931 when he was Chairman of the Board and B. L. Worden was President. Mr. Crane was formerly Vice-President in Charge of Sales and Engineering.

Additional officers were elected:

P. B. Harwood, Vice-President in Charge of Engineering; P. S. Jones, Vice-President in Charge of Sales; Philip Ryan, Vice-President in Charge of Manufacturing; E. W. Seeger, Vice-President in Charge of Development and Assistant Secretary; M. R. Fenno, Assistant Treasurer; J. C. Springer, Assident Secretary.

Ohio River Valley Compact Sets National Pattern for Stream Purification

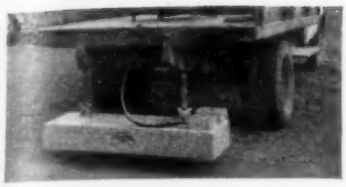
The Ohio River Valley Water Sanitation Compact, dormant since our entrance into World War II, received renewed impetus with the qualified adoption of the act by the State of Pennsylvania on April 2, 1945. Although ratification by Pennsylvania makes complete the legal disposition by all seven states originally decreed by Congress to be situated within the drainage basin of the Ohio River, the compact itself is not yet effective until Virginia, not considered one of the original signatory states, also adopts it. The next Virginia assembly is expected to vote on the bill.

The Ohio River Valley Water Sanitation Compact, because it affects such an expansive water shed involving quite a few states, should be instrumental in setting a pattern that can be followed in connection with other basins throughout the nation. Another step forward in this direction is a bill, now pending in Congress, known as the Spence Bill, which provides for assistance to both political subdivisions and private industry in carrying out steps to abate stream pollution wherever it is a problem.

Although the compact is still in the legislative stage, several industries have anticipated the provisions of the agreement by voluntarily working to control stream pollution in so far as their individual plants are concerned.

Barton Holl, a member of the Ohio State Commission on Stream Pollution and also an executive of one of the member companies of National Clay Pipe Manufacturers, Inc., 111 W. Washington St., Chicago 2, Ill., recently reported that "the clay pipe industry has worked actively on the program both by effecting control of industrial wastes of clay product plants located on tributaries of the Ohio, and by offering the services of technical men in the industry who are specialists on conduit to handle industrial waste, drainage or sewage disposal.

"Clay pipe manufacturers, particularly in the Ohio-Pennsylvania-West Virginia area, are ready to supply newly-developed products specially designed to meet the requirements of such grand scale anti-pollution facilities," Mr. Holl pointed out.



A truck-mounted electro-magnet that clears streets and areas of loose iron.

Rectangular Suspension Road Sweeping Magnet Picks up Loose Iron

Municipal street and highway officials will be interested in the new electro-magnet introduced by the Dings Magnetic Separator Co., 509 E. Smith St., Milwaukee 7, Wis., for sweeping roads clear of loose iron. This is a high intensity rectangular suspension unit with double gaps which are constant at all points to promote an even distribution of the magnetic flux over the entire magnet face. The equal pull thus exerted enables the unit to remove iron from all of the road or other area covered.

The new road sweeping magnet operates from a generator set carried on the truck bed and comes in a complete range of sizes to meet any requirement. Complete units including magnet, generator, and trailer are available.

Engineering Specialist for Allis-Chalmers

Grant M. Hinkamp has joined the Allis-Chalmers Mfg. Co., Milwaukee, Wis., as an industrial engineering specialist, according to a recent announcement by P. F. Bauer, Manager of the Industrial Sales Department of the General Machinery Division.

Grant M. Hinkamp

Mr. Hinkamp has had thirty years' experience in public works engineering and construction and will correlate the company's interests in public works projects. He comes to Allis-Chalmers from the Stone & Webster Engineering Corporation where he was in charge of the construction and operation of water works and sewerage systems at many important Army projects through the country.

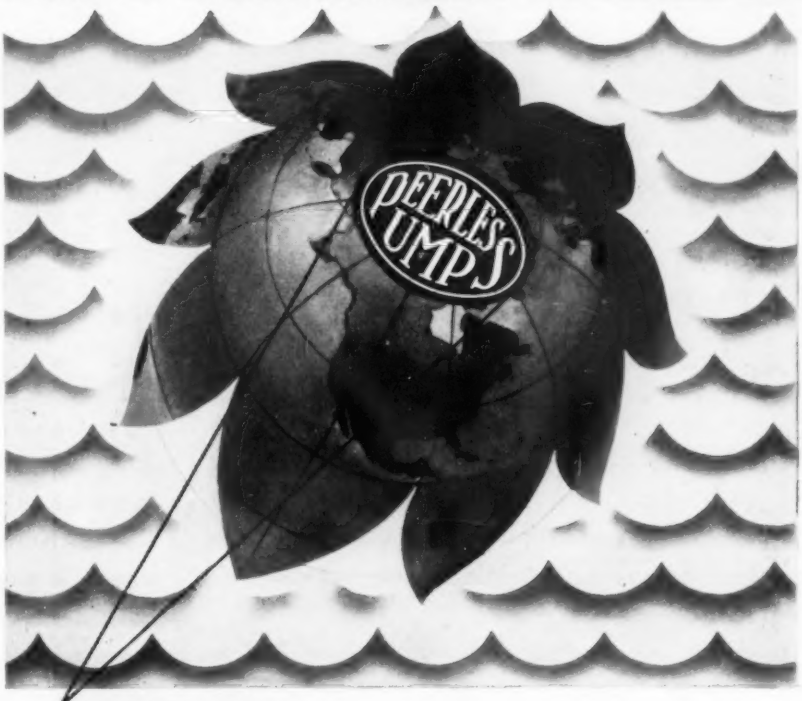
For some time before the war he was president of an engineering and construction business in Milwaukee specializing in water works and sewerage systems, filtration plants, and sewage treatment plants.

Highway Engineers Study Post-War Aerial Mapping

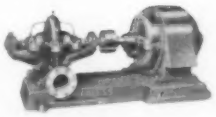
In order to be able to use engineering data available to their departments through the use of aerial photographs, engineers from the states of Illinois, Kentucky, Michigan, Wisconsin, the Province of Ontario, and Giffels and Vallet, Inc., Consulting Engineers of Detroit, Mich., recently completed a one-week course of instruction in aerial photographic interpretation and map compilation conducted by the Abrams Aerial Survey Corp. in its laboratories at Lansing, Mich.

The subject material of the course related directly to highway and airport planning and design. After the training course, it was the opinion of the entire class that low altitude photography and subsequent map compilation could eliminate much preliminary field work. Drainage of large areas came into the course for its full share of discussion. By means of the Abrams Contour Finder, center line profiles were run out on photographs, the contour of the water elevation drawn, and the flooded area behind a dam was computed. Spot checking elevations throughout an area and actual contouring problems were thoroughly studied in actual laboratory problems. All equipment used in the instruction was loaned by the Abrams Instrument Corp.

FOR A NEW WORLD OF WATER



PEERLESS now produces
HORIZONTAL as well as Vertical pumps



With the recent acquisition of Dayton-Dowd Company, PEERLESS now can supply a pump for any need, including SPLIT-CASE horizontal centrifugals. Vertical and horizontal types are made in capacities from 10 to 220,000 gallons per minute.

If you are planning to "step up" your water supply, consult with PEERLESS. You will benefit by new PEERLESS developments . . . increased precision, improved designs,

PEERLESS PUMPS

PEERLESS PUMP DIVISION
Food Machinery Corp.

FACTORIES
LOS ANGELES 31, CALIFORNIA
301 West Avenue Twenty-six
QUINCY, ILL. • CANTON 6, OHIO

What a Plane!

204 passengers — 320,000 pounds — 310 m.p.h.— 4,200 mile range — 230 ft. wing spread

Fleets of these and other globe circling titans will soon be landing at principal municipal airports throughout the country.

Future Air Giant Challenges Airport Builders—

Concrete meets the challenge!

When this titan lands it will concentrate on each of its two principal axles, a load of 155,000 pounds. It will be twelve times the size of present twin-engined commercial aircraft.

But the concrete runways of New York's Idlewild and other proposed modern airports will be able to carry this colossus in safety. And such heavy-duty runways actually cost less to build than any other pavement with equal load-carrying capacity.

In addition to this low first cost, portland cement concrete has low maintenance expense and long life under heavy service. Thus *low annual cost is assured*—the true measure of economy.

Pan American says, that with proper design and construction, it appreciates the excellent visibility of concrete, its high skid resistance, rapid drainage, low tractive resistance and freedom from loose particles which may injure personnel and plane.

Our engineers, working on hundreds of airports, have acquired valuable experience. Their assistance in designing pavements to carry any anticipated wheel loads is available without obligation to engineers now planning construction of airport facilities.

BUY MORE WAR BONDS • KEEP THE WAR BONDS YOU BUY

PORTLAND CEMENT ASSOCIATION

Dept. A8-4, 33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

SEPTEMBER 1945

SEP 2 1 1945

The American City

The Cities' Job—
Now That the War is Won

Special statements written for THE AMERICAN CITY *by*

MAJOR GENERAL PHILIP B. FLEMING
Administrator, Federal Works Agency

JOHN B. BLANDFORD, JR.
Administrator, National Housing Agency

J. A. KRUG
Chairman, War Production Board

CLARENCE E. RIDLEY
Director
International City Managers' Association

WALTER H. BLUCHER
Director
American Society of Planning Officials

HAROLD L. ICKES
Secretary of the Interior

L. B. SCHWELLENBACH
Secretary of Labor

PAUL V. McNUTT
Chairman, War Manpower Commission

CARL H. CHATTERS
Executive Director
Municipal Finance Officers Association

H. G. POPE
Executive Director
Public Administration Service

Also in this issue, statements on production and full employment by

JOHN W. SNYDER
Director of War Mobilization and Reconversion

F. H. LA GUARDIA
Mayor of the City of New York

And articles and items on a wide variety of subjects of municipal and civic interest, including:

Water Supply	Highway Design
Sewage Treatment	Planning and Zoning
Traffic Control	Housing
Airports	Community Organization
Outdoor Lighting	Full Employment
Conventions	New Publications

and other subjects indexed on page 3

Atomic Energy Challenges Municipal Officials

to seek safety for their communities from the destructive forces of war, not by burrowing underground, but by helping to build finer, more spacious cities in a happier and warless world; that "we the peoples of the United Nations" may achieve, as fully as can be, the ideals of the Atlantic Charter that "all the men in all the lands may live out their lives in freedom from fear and want."